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November 1, 1919

THE

# Modern Husbandman,

OR, THE

## PRACTICE of FARMING:

VOL. II.

CONTAINING,

The Months of *April*, *May*, and *June*.

*By* WILLIAM ELLIS,

A Farmer, of *Little Gaddesden*, near *Hempstead*, in *Hertfordshire*.

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THE

# THE

# MODERN HUSBANDMAN,

## For the Month of *April.*

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## CHAP. I.

### *Of Sowing* Wheat *in* April.

*HY it is too late to ſow Wheat-ſeed in* April.— I never knew Wheat ſown in this Month, for all Farmers are of Opinion, that, if Wheat-ſeed is ſown after the Month of *March*, the Crop will not anſwer; and this, becauſe the Heat of the Sun, by the Courſe of the Year, increaſes daily, and thereby impregnates the Earth with that quick Fertility, as to cauſe ſuch late ſown Seed to run ſo faſt into Stalk, as to miſs its Kerning Quality, which is repugnant to the Farmer's Deſign and Intereſt.

The Return of Grain is what we ſow our Seed for; not, but that moſt Husbandmen now entertain a different Notion of Sowing Wheat later than what they did formerly, when it was eſteemed a ridiculous and ſcandalous Neglect, if a Farmer had not green Wheat ſeen in his Fields, by *Michaelmas* Day. But now this Opinion is as much exploded, and to that Degree, that, where a Field of green Wheat is ſeen at *Michaelmas* Time, the People are ready to ſay, ſuch an ignorant Farmer will have a poor Crop of Wheat; and this, by Reaſon, if a mild Winter and Spring ſhould ſucceed, the Wheat would run Winter-proud: That is, it would grow ſo early rank, as to ſpend its Strength of Growth too ſoon, and then, when in the Spring-time, bleak Winds, nipping Froſts, and Chills of Wett attack the Roots of Wheat, they have not Vigour and Strength enough left to withſtand the Severity of their Power; and then the Conſequence is, that ſuch forward ſown Wheat ſhews its Weakneſs by the yellow and dying Blades, and where it happens, that Wheat is thus killed, by ſo much is the Crop damaged; a Damage that is often ſeen in the Grounds of an injudicious Farmer, eſpecially where the Wheat-ſeed is ſown ſo early in a dry warm Soil. This is one Sort of extreme Miſtake, that ſeldom ever falls to the Lot of a Vale-Farmer, but often to a *Chilturn* Farmer, by Means of his occupying Variety of Soils in incloſed Fields, where he can act as he pleaſes; and therefore it is, that we ſee here more different Sorts of Operations in Huſbandry, than in Vales, where each Farmer commonly plows and ſows his Ground at the ſame Time his next Neighbour does his, as they lie in open Fields together; and it is therefore that theſe Vale-Farmers are leſs ſubject to be miſtaken in the Time of ſowing their Wheat-ſeed, than *Chilturn* Farmers are; but there

there are other Reaſons that expoſe *Chilturn* Farmers to be miſtaken in the Sowing Wheat-ſeed, for, as theſe ſow Turneps, Rapes, artificial Graſſes, *&c.* they are obliged ſometimes to feed them off late, and thus are tempted to ſow Wheat late; and herein very much conſiſts the Ingenuity of a *Chilturn* Farmer, for, if he cannot make a right Judgment of the Nature of his Soil, he cannot rightly time the Sowing of Wheat-ſeed: As for Example, if he ſhould ſow a wet, flat, ſtiff Piece of Turnep-ground ſo late, as after *Chriſtmas*, he very likely would loſe his Crop by it: On the Contrary, if he ſhould ſow (as I ſaid) a dry warm Soil too ſoon, he may likewiſe loſe his Crop by it. Hence it is, that printed public Accounts, of the Nature of Soils, are perfectly neceſſary to be known by thoſe who are young Practitioners in Huſbandry, and thoſe of riper Years, that have gone on in a wrong Way of Farming, by Sowing Wheat-ſeed in diſagreeable Soils, or at a wrong Time of the Year; though it muſt be confeſſed, that, under the beſt of Judgment, Farming is a Lottery; but much more ſo, when it is carried on by ignorant or unexperienced Perſons, who therefore ſtand in the greateſt Need of being informed of the more profitable Practice of thoſe many Farmers who know much better than they do, as I have, in my ſeveral Monthly Books, given an Account of.

## CHAP. II.

### *Of* Barley, Oats, *blue* Peaſe, *&c.*

*OF Sowing Barley, white Oats, and blue Peaſe.* This early Spring Month, *April*, is not ſo late a one, as to deprive the Farmer of ſowing ſeveral Sorts of Field Seeds. This Month gives the Farmer,

who is Maſter of a proper Soil and Incloſure, an Opportunity to diſplay his Ingenuity, in ſowing therein a proper Seed; and, in order to do this, I ſhall endeavour to ſhew the Practice of other Farmers, that have acted in this Reſpect before them, and by this Means make known the dark and bright Side of their Management; for Treading the Paths that others have made by repeated Trials, and found it the ſureſt and moſt ſucceſsful Way of Proceeding, may ſave, in a great Degree, the Riſque of a Perſon's deceiving himſelf by taking wrong Meaſures. Happy, therefore, is he who follows the Practice of thoſe who have by repeated Trials found their Experiments to anſwer, in the moſt ſucceſsful and profitable Manner.

*The Management of a bad Farmer who was poſſeſſed of a proper Soil, and yet ſowed no Barley.*—— This Farmer rented an incloſed Farm in a *Chilturn* Country, where his Soil was chiefly a clean Loam, not too wet nor too dry, for which he paid ten Shillings an Acre a Year, for eighty Acres, but had no Common to keep a Flock of Sheep on to fold, and therefore he kept about forty Ewes, for Breeding only; which diſcouraged him from Sowing Barley, and cauſed him to ſow only Wheat, Peaſe, and Oats. Now this Farmer put himſelf to the Charge of digging Chalk, which he could do almoſt in any Part of his Ground, and laid it on his Loams, that it did ſome Service to: But alas! Chalk alone will not do; for, though it is a dry, ſhort, ſweet Dreſſing, yet it wants the moſt neceſſary Quality of all others, and that is the fertile one; for which Reaſon, a judicious Farmer adds Dung to it in one Shape or other, as knowing that Chalk alone is of a poor Nature: However, this Farmer, by making Uſe of no other Dreſſing, than what his Stable, Hog-ſtye, Cow-houſe, and Hen-houſe returned him, had not enough to ſpare to aſſiſt a Barley-

ley-Crop, nor would he be at five Pounds Charge of buying Soot, Lime, Horn-ſhavings, Woollen Rags, or Malt-duſt, *&c.* once in a Year, to get ſix or eight Acres of good Barley, and thereby loſt a profitable Opportunity; for, without a fine Tilth, and good Dreſſing beſides, it is a Folly to ſow Barley. Now as this Farmer lived but twenty-ſix Miles from *London*, he might (as many do that live further off than he) have Variety of Manures for this Purpoſe; for it ſometimes happens, that a Barley-Crop pays a Farmer more than a Wheat-Crop, becauſe, when Wheat, by the extreme Inclemency of Winter Weather, is hurt and damaged, a Barley-Crop, that is ſown at a ſafer Time of Year, may anſwer far beyond it, as it happened in the Year 1740; for had not the Barley-Crop ſucceeded in that Time, better than the Wheat-Crop, there had been a moſt lamentable Famine, indeed; but, as it happened, the Plenty of Barley helped out with the Scarcity of Wheat, and gave many poor Families an Opportunity to live, that would otherwiſe have been ſtarved. From all which I would obſerve and infer, that it is a great Loſs to let ſuch a Farm be without a Barley-Crop; not only for the direct Profit, that it produces beyond Oat or Pea-Crops, but alſo for the Benefit of giving the Earth a Change of Seed, which is of vaſt Conſequence to a Farmer, becauſe there is no Ground whatſoever but affects this Piece of Huſbandry. And whoever does not practiſe it, will be his own Enemy. In the Vale of *Ayleſbury*, as I have remarked in my former Works, their Farmers, ſome Years ago, thought themſelves abſolutely in the Right of it, when they ſowed their blue Clay, and ſtiff, wettiſh, black Loams, with only Wheat and Horſe-beans; but ſince ſome of them have ſown Barley, by Way of Change of Seed, they have found their Account in it, and been convinced that

that Change of Seed is one very great Means to come by plentiful Crops of Corn.

*The Management of a Farmer, who, by Reaſon of a bad Soil that he rented, was diſcouraged from ſowing Barley.*—This Farmer, like many others in the World, rented a Farm in the *Chilturn* Country that lay about Twenty-ſix Miles from *London*, whoſe Soil, for the greateſt Part, was a red, ſtiff, ſtony Clay, mixed with a Loam, ſo that it might be called a clayey Loam, and, like the yellow Clay, is of the moſt hungry, cold, and worſt Sort of Clays. In this Soil there have been ſeveral Attempts made to get Crops of Barley, and to this Purpoſe neither repeated Plowings were wanting to get the Ground into a fine Tilth, nor Manure, or Dung, to fertiliſe it. But, notwithſtanding all requiſite Preparations were made Uſe of, for obtaining good Crops of Barley, the Farmer was diſcouraged from making further Trials, becauſe of the ſeveral fatal Accidents that attend Barley-ſeed ſown in ſuch a Soil. If a long dry Time directly ſucceeds the Sowing, then ſuch a Clay forms a cruſty Surface and hinders the infant Barley-blades from making their Way into the Air; and, if a wet, cold Time ſucceeds, then the Chilneſs of the Weather, joining the cold Nature of the Clay, ſtarves the Barley, makes it look reddiſh, inſtead of a deep green Colour, and cauſes it to pine till great Part of it dies away; ſo that this, and his neighbouring Farmers, who occupy the ſame Sort of clayey Soil, have been ſo diſcouraged from ſowing Barley, that they have forborne any farther Attempt. This engages my Pen to repeat what I have formerly made appear, *viz.*

*How, by Vertue of Steeping Barley-Seed, a red or yellow clayey Soil, that lies tolerably dry, may be ſafely ſown with Barley-ſeed to great Profit.*—The before-

fore-mentioned Farmers are well known, for ſeveral Miles round about them, to be good Managers, and very expert in the Art of Plowing, Sowing, and in moſt other Branches of the excellent Art of Agriculture; yet, to my certain Knowledge, they act as ignorantly, in Reſpect of giving Ear to any new Improvement, as if they lived in *Africa*; for I have told ſome of them how they might get good Crops of this Grain in their clayey Soils, by ſteeping the Seed, but it proved to no more Purpoſe than Whiſtling to the Air; however, it had another Effect upon the Gentleman I gave an Account of in laſt Month; one that rented about Three-hundred Acres of Arable and Meadow-ground, moſt of which was a ſtiff, flat, wettiſh, clayey Loam, wherein he ſeldom, by the common Way of ſowing his Barley-ſeed dry, got above Three-quarters of Barley on each Acre; but by taking my Advice, and looking ſtrictly after the Management of Infuſing the Seed according to my *Nitre-Receipt*, he got ſix Quarters of Barly off an Acre, as he himſelf declared to me; a Quantity, as I was informed, never got off ſuch a Soil before. So theſe Farmers, I have juſt wrote of, may, by the ſame Rule, get good Crops of Barly off their red clayey Loams, if they would be perſuaded to Reaſon, and take the ſame Method this Gentleman did, to ſteep their Barley-ſeed according to my public Receipt; for, by this Means, the Barley would forthwith puſh up its Blades before any dry Weather could have Time to cruſh the Surface and ſpoil the Crop, which leads me to make my intended Obſervations.

*Of the Benefit of ſowing Barley-ſeed late.*— This may ſeem a Paradox to many, but I hope to make it obvious, that there is a Neceſſity for ſowing Barley-ſeed ſo late as in *April*, and likewiſe a Safety in doing the ſame to a great Advantage.

Firſt,

Firſt, then, I am to ſhew that there is a Neceſſity ſometimes, for a Farmer, to ſow his Barley-ſeed ſo late as in *April*. In this Caſe, the Vale Farmer, who occupies a ſtiff clayey Soil, or a wet, ſtiff, loamy Soil, that lies in the Ridge-form in open Fields, is not here meant to be the Perſon I write of, that is under a Neceſſity of ſowing his Barley late; no, theſe have no Occaſion to be under ſuch a Neceſſity, becauſe, as they ſow no Clover, Turneps, nor Rapes, they are at Liberty to ſow their Ground as early as they pleaſe; but it is not ſo with many of the *Chilturn* Farmers, who ſow Clover, Turneps, Rapes, and Rye for feeding Sheep and other Cattle in the Winter and Spring-ſeaſons. Theſe, I ſay, are thoſe who are ſometimes under a Neceſſity of ſowing their Ground late with Barley-ſeed. For Example, I have a reſerved Field of Turneps, which I ſowed late, in order to have them young and tender in *March*, for feeding my Sheep and Lambs on them, till either my Rapes or Rye is fit to turn them into; which would happen, as I will ſuppoſe, at the Beginning of *April*, and that they will eat the Rapes or Rye off in a Month. Now, if ſuch Ground is fit for Barley, it may be enjoyed to great Profit, by Means of ſteeping the Barley-ſeed in Liquor, and liming it afterwards, *&c.* for, in this Caſe, here are two aſſiſting Properties given the Seed; that of the Sheeps-dung, and thus preparing the Seed in the greateſt Safety; for, in the ſecond Place, the Seed, by being infuſed the appointed Time, will ſprout out in a few Days, and, as the Heat of the Weather increaſes with the Length of Days, it will grow a-pace, and become a ſhady Cover to its Roots, that by this Means will grow ſo vigorous, as to withſtand Heats and Droughts for Months together, till, at laſt, if the Ground was in good Order at Sowing-time, a large Crop may be

be expected very early: Whereas, if ſuch Land was ſown ſo late with only naked dry Seed, and a Courſe of dry hot Weather ſhould follow directly, ſuch Seed may lie in the Earth a great While before it ſhews its green Blades; and when it does, they may, very likely, grow into ſeveral Degrees of Ripeneſs, and then what muſt be the Malt that is made from ſuch Barley? Why, perhaps, there will not half of it be true Malt, and then, I am ſure, the Buyer of it muſt greatly ſuffer in large Quantities; for, I am certain, in ſome Summers, there have been Ten-thouſand Quarters of Barley in this Condition, when the Seed has been ſown in the old wrong Way of doing it, as moſt is done at this Time throughout *England*; for, who will believe that three Buſhels of Barley-ſeed will ſurely (with the Bleſſing of Heaven) produce ſeven Quarters at Harveſt, if the Earth was well manured and in a fine Tilth at Sowing-Time, although ſowed ſo late as in *April?* But it is certainly true that it will not only produce this Quantity, but likewiſe that Barley of an equal Growth, provided the Seed was infuſed accordingly. But this Product would aſſuredly happen with the greater Safety, and to the greater Profit, if the Seed was bought from off the ſandy Loams of *Chelſea*, *Fulham*, or *Hammerſmith* in *Middleſex*, as I ſhall farther take Notice of.

*Why a Barley-ſeed is more profitable to ſow in a ſtiff Earth that comes off a ſandy Loam, than any other Barley-ſeed.*—The Change of Seed is of ſuch Importance towards improving Crops of Grain produced by it, that many ſend for Wheat, Barley, Peaſe, *&c.* to great Diſtances. For this Purpoſe, there are many Sacks of Wheat carried out of *Hertford* and *Bedfordſhire* into *Northampton*, *Leiceſter*, and *Darbyſhire*, for the Sake of ſowing a Seed that comes off a chalky Soil, in a clayey or ſtiff loamy Soil; ſo the *Hertfordſhire* Farmers,

ſeveral of them, ſend for *Fulham* Barley-ſeed above thirty Miles an End, and all by Land-carriage. Now, though we have ſandy, chalky, and gravelly Lands juſt by Home, yet, we of *Little-Gaddeſden* chuſe to be at the extraordinary Charge of ſending for this *Fulham* Barley-ſeed, though we live Thirty-four Miles from it, and find our Account in ſo doing; for as we ſow it in our ſtiff Loams, from off a ſandy ſhort Loam, it returns us a very early Crop, with a Kernel much bigger than that we ſowed, and is ſo natural for making true Malt, that it is commonly ſold for two Shillings a Quarter more than our common Barley is; but there are other Reaſons for our preferring this *Fulham* Barley-ſeed before all others. One is, that by getting a Crop of ſuch Barley, ſooner than ordinary, off the Ground, it gives a Farmer the Opportunity to ſow the ſame Land with Turneps, early enough to enjoy a full Crop of them. Another Reaſon is, that we can (if the Land is proper for it) ſow Rape-ſeed. A third is, that, by mowing off ſuch a very early Crop, we have an Opportunity to plow the Ground ſeveral Times, for ſowing Wheat in the ſame in *October* following. Another is, that, this Barley being ripe before Wheat, it may be very probably got into the Barn in the drieſt Order, as theirs about *Fulham* commonly is, who thereby are Maſters of the beſt of Barley-ſeed. And it is this excellent Quality that makes it a fit Sort to be ſown in the *Northern* Parts of this Kingdom, becauſe this Barley-ſeed, beyond all others, may, as I have obſerved, be ſown late and mown early. In ſhort, there are theſe two great Conveniencies attending this peculiar Sort of Barley; one is, that, by ſteeping the Seed, a Farmer is out of the Danger of having his Barley-crop ſuffer, by Dryneſs of Weather, although the Seed be ſown in any Time of this Month of *April*, in a dry Soil. The other is, that, notwithſtanding

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ſuch late Sowing, the Crop, produced from the Seed of this *Fulham* Barley, will be ripe as ſoon, if not ſooner than the Wheat-crop. Now to have this *Fulham* Barley-ſeed in many Parts of *England*, *Wales*, and *Scotland*, it may be eaſily and very cheaply ſent by Water-carriage, becauſe ſeveral of the Farmers, who ſave and ſell this Barley-Seed, live very near the River *Thames*, ſo that there will be little or no Charge to carry it to the Boat; and, as it is then on the Water, it need not be off it, till it is put on Ship-board, and unladen at the deſired Port. But there muſt be a great deal of Care employed in examining the Seed, for there is, ſometimes, a conſiderable Difference in it; ſome may have the Seeds of Weeds among it; others may have thoſe light Kernels mingled with it, that ſhould have been ſeparated from the Seed: For, if there are many of theſe, the Crop will be a great deal the worſe for it; for, as the Seed is, ſo will the Crop be in a great Meaſure; therefore, if a Gentleman will be at the Charge of it, I will take the ſmall Kernels from the large ones, and then the Seed will be in the greateſt Order for Sowing, and produce large Ears and large Kernels, that conſequently will make the beſt of Malt. Now to have ſuch Barley-ſeed in this high Perfection, after the *Fulham* Farmer has ſcreened and ſieved it ready for ſelling it for good Seed, I come with the ſmall Tool I gave an Account of in *March*, and diſcharge the Seed of thoſe light ſmall Kernels, that would produce light ſmall Barley-corns again, if they are ſown; but then there muſt be an Allowance made, for the Loſs of ſuch light Kernels, which, after they are thus ſeparated from the heavy and larger ones, will be only fit for the Swine or Poultry. But this is not all the Skill that is required of a Buyer of this Seed; the Barley, by being got in damp, may ſo heat in the Mow, that the Seed will not grow

to Profit: In this Caſe the Sower will loſe his Money, Time, and Labour; and it is on theſe Accounts that I buy my *Fulham* Barley-ſeed of one or two particular Men, that I know ſpare no Coſt nor Pains, but are more than ordinary curious in the Saving of it; and, for this Reaſon, it is true they have the greater Price for it; but then no Perſon ought to grudge a Shilling or two extraordinary in every Quarter for ſuch a delicate Sort of Seed; becauſe a Shilling, kept back on this Account, may occaſion the Loſs of many Crowns in a large Crop of Barley. This moſt excellent Barley-ſeed I furniſh to any Perſon on a proper Order; and, as I have ſometimes Commiſſions for this Seed, I here give Notice, that it will be to no Purpoſe for any Perſon to ſend an Order to me for it, after the Month of *February*, becauſe it is commonly all ſold off before *March*; and therefore the moſt proper Time, to ſend for this Seed, is between *New-Year's-Day* and the latter End of *February* at fartheſt. And if Gentlemen who live in ſuch convenient Parts, where this Barley may be ſent them, by Water-carriage; or by Land, if the Carriage is not too long and expenſive; I ſay, if Thouſands were but ſenſible of the great Improvement that may be made in Barley-crops, and in making Malt, by Means of their ſowing this *Fulham* Barley-ſeed, I am almoſt ſure they would ſtrenuouſly endeavour to have a Quantity of it ſent them every third Year; for this Barley-ſeed will laſt two Crops, at leaſt, without degenerating; but, if ſown longer, it will grow worſe, and at laſt become the ſame Sort of common Barley that is natural to the Country.

*Of Preparing Barley-ſeed for Sowing.* — This is more than ordinary neceſſary to be done, whether it be in the Uſe of rath ripe *Fulham* Barley-ſeed, the flat-eared Sprat Barley, or the famous and moſt profitable Barley-ſeed of all others whatſoever, the *Turky* Barley, which, when out of

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its Ear, can hardly be known from a large-bodied Wheat Kernel, though in its Ear it grows bearded like common Barley, as I have been an Eye-witneſs of. I ſay, when either of theſe are to be ſown, the Seed ſhould be firſt ſteeped in ſome fertile *Menſtruum*, to prevent the ſeveral Miſchiefs and Loſſes that attend the Sowing of dry Seeds in this Month of *April*, which ſuch a late Seaſon ſubjects the Seed to; for, in Caſe a long dry Time ſhould directly follow the Mowing of Barley in the common naked Way of Sowing it, the Seed will lie almoſt unactive in the Ground, and ſome of it, very likely, canker, corrupt, and die; or, for Want of Moiſture, its ſtunted puny Blades will make ſo ſlow a Growth, as to give the Worm an Opportunity to eat and kill it; or, if it does ſurmount theſe two Diſaſters, at Harveſt there will certainly be two, if not three Sorts of Ripeneſs in the Barley-crop, if the Seed had not received Rain enough in due Time to cauſe the Roots to throw up an even Growth of Barley. Now the ill Conſequence of all this is abſolutely prevented, by ſteeping the Barley-ſeed according to my Salt-petre Receipt; which, as it has been publiſhed in one or more of theſe Monthly Books, I ſhall forbear Writing here, and add, that as there are ſeveral other Liquors for ſteeping Barley-ſeed in, preparatory for fertiliſing and inſuring a good Crop, I ſhould have mentioned them before; but, as I intend to furniſh the World with more Works on the great Subject of Agriculture, I ſhall defer them with a thouſand others for more convenient Opportunities; which Article of ſteeping Barley-ſeed will be of the greater Importance, when I make known more than one Way of doing it much cheaper than with Salt-petre; for I am very ſenſible, that Farmers reject the very Name of a new Improvement, when the Charge of a few Shillings is tacked to it; as, indeed, the Caſe is in this Reſpect, when Salt-petre

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ſells for a Shilling or more a Pound, as it has done of late, by Reaſon of the great Conſumption of it in the making of Gunpowder this War Time. But as my other Receipts for the imbibing of Barley-ſeed will be as cheap, as Salt-petre is dear, I hope I ſhall give the Public the greater Satisfaction, when I expoſe them to the World.

*Of Sowing Barley-ſeed.* — As to the Sowing of Barley-ſeed, I have in laſt Month given an Account of it, and therefore have the leſs to ſay here; ſome Perſons I know there are, who ſcruple the Sowing of rath-ripe, or *Fulham* Barley-ſeed in wettiſh or ſtiffiſh Earths, becauſe they know it grew in the *Southern* Part of this Nation in a dry, warm, rich Soil, as thinking it too tender for their Ground and Situation: And, indeed, I am of Opinion they are in the right of it, on the Suppoſition that they know of no better Way of Sowing than after the old Mode, which obliges all Farmers to ſow Barley-ſeed dry, and before the Month of *April*. But the Caſe is altered, becauſe there are a Thouſand new Improvements found out and practiſed now, that never were known before; and, among the reſt, this is one, of ſowing Barley ſo late as in *April* with Safety, by the Means of liquoring the Seed, and liming it afterwards, which fits it for ſo ſpeedy a Growth, that let the Land be ever ſo dry, when it is ſown, and if there is no Rain for Months afterwards, ſtill the ſoaked Barley-ſeed, by carrying Liquor enough with it into the Earth, will ſtrike an expeditious Root, and throw up a moſt quick Blade, to the Carrying on its Growth in a flouriſhing Condition till Harveſt. Therefore even the Vale-Farmer need not be afraid of Sowing *Fulham* Barley-ſeed, nor any other ſo late as in *April*, notwithſtanding the great Diſcouragement that a clayey Soil brings many of them under, even to a Dilemma, becauſe, ſay they, if we ſow our Barley-ſeed here too ſoon, the Chills of Froſts and Wetts will

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ſpoil it; and if we ſow it ſo late, why then the ſtiff Surface will bind ſo faſt (if a dry Time preſently ſucceeds the Sowing) that they will be in Danger of loſing their Crop by it. Now, to avoid the Damage that attends theſe two Extreams, Soaking the Seed will be an abſolute Prevention to it, and Sowing the ſame in *April*, which I know many of them will not believe; but let any of them but try a half Acre Ridge-land firſt, and, as that fares, let them deſiſt, or go on hereafter with the ſame Practice. This is as fair a Plan as can be well propoſed; and, if they will keep up to the Punctilio of my Nitre Receipt, I will venture my Reputation on the Succeſs: For we try and prove the *Fulham* Barley at above thirty Miles to the *Northward* of *London*; and that in ſtiff, wettiſh, flat, *Chilturn* loamy incloſed Fields, and ſeldom ever find it fail our Expectation; and, if ſo, I am ſure it ought to be an Encouragement to Thouſands of others, for their Sowing of this, or any other Barley-ſeed thus, and ſo late as in *April*, in a ſtiff Earth.

*A Caſe ſhewing how a large Field was ſown with Barley in a wrong Manner, and how the Farmer laſt moſt of his Crop by it.* — As I have juſt now been writing on the great Benefit of ſowing Barley-ſeed wet, it comes in my Way to give an Account of a particular Caſe that occurred to my Knowledge on a Journey I took in *October* 1743, when being on the Road, I accidently fell in Company with a Farmer of the Country I was then in, who, coming againſt a large incloſed Field of the gravelly Kind, told me the Farmer had plowed the Ground ſufficiently fine for the Reception of the Barley-ſeed, but had hardly his Seed again at Harveſt. Upon his telling me this, I deſired him to give me his Reaſons why the Barley-crop miſſed. His Anſwer was, firſt, that though he had plowed his Ground fine enough, it had not a Dreſſing beſtowed upon it capable of nouriſhing a full Crop of Barley;

Barley; ſo that that, which was given the Ground, did little or no Good; becauſe, ſecondly, there happened to follow a long dry Time preſently after the Seed was ſown; and, though there fell a little Rain, ſufficient to cauſe the Seed to ſprout and grow up ſome Heighth, yet, for Want of more Moiſture to carry forward its Growth, the Crop began to pine, and the more by Reaſon of the natural Dryneſs and Heat of the gravelly Ground, and the hungry Quality that always attends its looſe Parts; inſomuch that moſt of the firſt Shoots of the Barley withered and were dying away, when, ſome Showers of Rain falling, they ſo refreſhed and enlivened the Barley Roots, that they puſhed up new Shoots, that grew into ſeveral weak Stalks, and unequal very poor Ears, that had not Time to perfect their Kernels; becauſe, by theſe After-ſhoots, great Part of the Field of Barley became a Sort of ſecond, but untimely and abortive Crop; ſo that, at Harveſt, the upright and ripe Ears made a thin and very poor Appearance to the Sight of paſſing Travellers, but worſt of all to the ignorant Farmer and Owner, who I have Reaſon to believe, if he was told, before the Sowing of this Field with Barley-ſeed, he would run ſuch a Riſque of having it ſpoiled by dry Weather, if he did not firſt ſoak it in a proper Liquor; that he had better give two Shillings for a Receipt, and thereby be taught how to ſteep the Seed, and prevent the Misfortune: I hardly ſuppoſe he would beſtow ſo much Money, nor half that Sum for it. On the contrary, it would be more likely he would reject it, if it was given him only for Good-will, and, perhaps, add a ſcorning Flout or Jeer againſt all new Ways, as believing none can exceed the old ones. I have met with ſome of theſe obſtinate Blades in my Travels, that were not only Farmers, but Men of ſomewhat a higher Rank, who, becauſe they have read ſome uſeleſs, vamped up, falſe old Theory, perhaps, cal-

calculated at firſt for a different Climate to this of *England*, and wrote by Authors not capable of judging of their Truth or Falſhood, and ſo have ſent them into the World a ſecond Time, right or wrong, to the ſcandal of the greateſt and beſt natural Subject that can be written on; and this, becauſe they have not had a Practice, for a ſeries of Years, in the Art of Agriculture, which is the chief Means that could qualify them for making a better Diſtinction and Judgment of what they wrote; which puts me in Mind of two Gentlemen, who took a great deal of Pains to prove me a Lyar, or a Writer of Truth.

*How two Gentlemen travelled a hundred Miles to prove this Author a true or falſe Writer.* — This was told me from one who lived on the Spot at *Barley-End*, in *Buckinghamſhire*: That two Gentlemen had rode fifty Miles an End to ſatisfy their Curioſity, if it was true, what I mentioned in one of my Books of *Husbandry*, that Trefoil and Clover-graſſes grew together on a chalky Soil in this Part of the Country. The Perſon's Anſwer was, that, if they would ride a little farther, he would ſhew them the Field where they were ſown, and now are to be ſeen. The Gentlemen went; and, when they had received ocular Demonſtration of the Fact, one of them ſaid, *I find all is not Lyes that is written*; which leads me to obſerve, that theſe Gentlemen were in the Right of it to divert themſelves with a Ride, to prove the Truth of an Aſſertion of this Kind, becauſe, if they were Owners of ſuch a Soil, they might with the more Aſſurance venture to ſow theſe Graſs-ſeeds in the ſame, for Seeing is Believing. But, if they had lived at a much greater Diſtance, they might have ſaved themſelves the Coſt and Pains of a long Journey, by being more credulous, and have taken my Word for the Truth of it; for I muſt be a very audacious Writer, in-

deed, if I had ventured my Reputation on a falſe Bottom in this Reſpect, by directing any Perſon to a Place within two Miles of my Houſe, to prove the Truth of what I aſſerted for Fact: However, I hope it is to a good Purpoſe, I did ſo, for by this Caſe many may be informed, that Clover and Trefoil will grow extraordinary well together, for two Years, in a chalky Soil, that lies flattiſh, and is of a moiſt Nature; but they ought not to expect this Succeſs where a Chalk is too much of a hurlucky or ſtrong Nature, for then it will not adminiſter a ſufficient Quantity of Moiſture, in dry Seaſons, to nouriſh the Graſs to any great Perfection; but, where a Chalk is agreeable, the Trefoil is very proper to grow along with the Clover, becauſe it is a branching cloſe-headed Graſs, that is therefore the more capable to ſhade the Roots of the Clover and forward its Growth in dry Summers. But to return to my former Subject, of the Farmer that loſt moſt of his Crop of Barley by wrong Management: I ſay, if this Farmer had ſteeped his Barley-ſeed, according to my Salt-Petre Receipt; inſtead of having ſo little Return at Harveſt, he might very probably have had four or more Quarters on every Acre, notwithſtanding the long dry Time that ſucceeded the Sowing of his Seed; and, had he but ſufficiently dreſſed his Ground, I think there had been no Danger of his having ſeven Quarters on each Acre: However, that I may be within Compaſs of the Matter, I will ſuppoſe he only loſt three Quarters of Barley on each Acre, purely for Want of ſteeping the Barley-ſeed, that would have coſt him not above three or four Shillings, at moſt, for preparing ſo much as would have compleatly done the firſt Acre, and leſs for the reſt; then, what a Loſer he muſt be, I leave for my Reader to judge.

*Of Sowing Barley-ſeed by the Drill-plough.*— In this

this Month the Drill-plough comes in as a very ſerviceable Inſtrument, for Sowing of Barley-ſeed; becauſe, as the Weather is got warm, and like to be more ſo every Day, the Seed, by being drilled in, lies deeper and ſecurer in the Ground, than that only harrowed in, from the Power of Heats, and Damage of too great and long Droughts, which ſome times hinder a Farmer of almoſt half his Crop of Barley, ſown in the Broad-caſt Way: And therefore it is now in frequent Practice with ſeveral Farmers, to ſow Barley out of the Hopper of a Drill-plough, at a Foot, or ſix Inches aſunder, in Drills or Rows. If at a Foot Diſtance, the *Dutch* Hand-hough muſt be afterwards employed, to keep the Intervals clean from Weeds, to help this Barley-Crop, and for ſowing them the next Seaſon with Wheat, Barley, or other Grain; gravelly, chalky, ſandy, and dry Loams are vaſtly improved by this Means, and will, with little or no Dreſſing, return plentiful Crops of this Corn; and, as theſe Soils are not ſo proper for Wheat as Barley, they may be ſown Year after Year with Barley, by this Means of Drilling in the Seed, which would grow into the greater Crop, if it was firſt ſoaked and limed in a proper Liquor. There were many poor gravelly Fields ſowed with Barley, by the Drill-plough, this laſt Year 1743; and, although the former Part of the Summer was attended with very dry Weather, yet the Barley grew in fine Crops; or the Barley-ſeed may be ſown by the Three-wheel, light, Drill-plough, at ſix Inches Diſtance in Drills, to great Profit, without Houghing, becauſe the Ploughman can ſtraddle the two fore Wheels, wider or narrower, to a Farmer's great Conveniency; which is one great Perfection of this Sort of Drill-plough, for, by it, a Perſon may ſow his Seed in as cloſe, or in as diſtant Drills, as he thinks fit.

## CHAP. III.

### *Of Dreſſing and Manuring the Ground for* Barley-*Crops.*

*THE Neceſſity of Dreſſing or Manuring Ground, for fertiliſing Barley-Crops.*— As Barley is a Grain that cannot well grow too thick, it requires a more than ordinary Aſſiſtance, to ſupport its Crop, eſpecially when it is ſown in the old dry Way; for, when the Seed is not firſt liquored, nor the Ground dreſſed or manured, there is little Hopes of a good Crop. Wheat, and moſt other Grain, will proſper with leſs Dung or Manure than Barley will; from hence it is, that many Farmers have fallen into the Miſtake of ſowing a great deal of Ground with Barley-ſeed, and been at the Charge of half dreſſing it, in Hopes that, with the Help of a kind, warm, rainy Time, they may enjoy a plentiful Crop: But alas! many have deceived themſelves on this Account, and been convinced by lamentable Experience that, had they ſown but five Acres, where they did ten, and put all the Dung on the firſt, that they did on the laſt, they would have had a greater Return at Harveſt. What a Loſs then muſt this be, enough to break a ſlender-pocketed Farmer, who ventures to ſow twenty or thirty Acres of Ground with Barley, under a half Dreſſing, and with dry Seed? And eſpecially one that rents a Vale-Farm, becauſe, if he neither prepares the Seed, nor the Ground, it is great odds, if his Barley-Crop is not ſpoiled by two Extreams of Weather; one is, that, in Caſe a very dry Summer ſucceeds, their ſtiff bluiſh, or black clayey, or marly Soils will crack and ſtunt the Growth of the Barley-Crop; and, if a very wet, cold one happens, the Waters may ſtunt or kill a great

great deal of that Barley, which grows near the Water-thoroughs; a Caſe well known to the Coſt and Damage, ſometimes, of Thouſands of Vale-Farmers, who, by the laſt Means, have little elſe to mow beſides that Barley which grows on the Ridge Part of their Acre and half Acre Lands. Now, to prevent theſe fatal Diſaſters in a great Meaſure, liquoring the Barley-Seed, and well dunging or manuring the Land, is abſolutely neceſſary for obtaining a full Crop of this univerſal Grain, by enabling the Seed to make an expeditious firſt Growth, in order to bring on an early Head to cover and ſhade the Roots, againſt the Violence and Damage of too great Heats and Droughts, and withſtand the Chills of Inundations of Waters, that frequently happen in the low Situations of Vale Grounds, and ſtagnate the Roots of the Barley, as many of the Hill Farmers are Eye-witneſſes of, when they behold Vale Lands almoſt covered with Water, that appear like Part of a Sea.

*Of Dreſſing and Manuring Vale Grounds for a Barley-Crop.*— I have known Vale-Farmers, for the foregoing Reaſons, pen their Sheep twice on the ſame Land, or what may be called *double Dreſſing* it: Others will caſt Dung firſt, and then fold on the ſame Ground; others will only manure their Barley Land with Pigeons-Dung, as the beſt of Dreſſing for it; and, of late, I know one, and only one, Vale-Farmer manure his Barley-Crop with Soot, and, I was a Witneſs, it did great Service, though not ſo much as if he had made Uſe of a ſufficient Quantity of Soot; but this he did not do, his Quantity I think was no more than fifteen Buſhels to an Acre, which he ſowed over the ſprouting Barley, juſt as its green Blades appeared above Ground; whereas, had he ſown ten Buſhels on every half Acre Ridge Land, he had compleatly manured all the Barley Ground. However, the Soot he made Uſe of did him a great deal of Service, in the wet cold Spring,

Spring Time of 1738: By which Trial I am convinced that Coal Soot is very proper to aſſiſt Barley-Crops in Vales, contrary to the received ſtaunch Opinion, ſo long entertained by theſe Farmers, who always, as far as I can learn, held it a loſt Attempt to make Uſe of Soot for aſſiſting their Crops of Corn, as believing their wet cold Land would draw the Vertue of it in too ſoon, and the ſooner, if great Rains fell preſently after it was ſown; and, if a very dry hot Seaſon preſently followed, then they believed the Soot would help to burn up, inſtead of nouriſhing the Corn. But, as I ſaid, Experience ſhews that Soot agrees extraordinary well with Barley, ſown on Ridge Vale Lands; and ſo it does, with ſeveral Sorts of Soils in the *Chilturn* Country.

*Of Dreſſing and Manuring* Chilturn *Lands, for fertiliſing Crops of Barley.*— The vaſt Quantities of Manure that are yearly fetched from *London*, and conſumed in *Hertfordſhire*, for fertiliſing Crops of Corn and Graſſes, prove, that it does conſiderable Service to *Chilturn* Farmers; for improving our Barley-Crops, we make Uſe of Soot, Rags, Ivory-ſhavings, Cows and Hogs Hair, Rabbits, Hens, and Pigeons Dungs, Trotters, Hooves, Sprats, Malt-duſt, *&c.* for, as our Lands are not ſo marly and rich as thoſe in Vales, we are obliged to be at a great Expence for ſuch Aſſiſtance; which is alſo more than ordinary neceſſary as we often, and oftener ſow our Land, than Vale-Men can, as we are incloſed, and they are not; and this we are forced to do in a double Manner, where the Land is a Gravel, a Chalk, or a clayey Loam; therefore we ſow Turneps, Rapes, Clover, Thetches, *French* Wheat, *&c.* to help towards inriching our Grounds; and beſides theſe we frequently add the Fold, or Horn-ſhavings, Stable or Fowl Dungs, or ſome other Sort, or elſe we could not get five, ſix, and ſeven Quarters off an Acre: But, beſides thus aſſiſting Barley-Crops,

Crops, with one or two Dreſſings of Dung and Manure, it is abſolutely neceſſary that we *Chilturn* Farmers be at an extraordinary Charge for ſo doing, becauſe there is another ſecond Crop to partake of its Benefit the next Year; and therefore, we ſay, Two Years Crops lie upon this one Year's Dreſſing; and firſt, if we dreſs Barley with Soot, about a Week or Fortnight after it has been ſown, we ſow twenty Buſhels of it over each Acre; but others think it a better Way to ſow this Quantity of Soot, as ſoon as the Barley-ſeed is ſown, and harrow both in together; and indeed, I have found it the beſt Way, by Reaſon it lies, in this Form of Sowing, cloſer to the Kernels, than when the Barley is ſown firſt, and harrowed in, and the Soot ſown afterwards; nor has the Soot ſo much Power this Way to burn the Blades of the Barley, in Caſe a dry hot Seaſon ſhould follow, as it has when ſown after the Barley is harrowed in; and ſo efficacious is ſuch a Dreſſing of Soot to the Ground, that a Pea-Crop ſowed on the ſame, in the next Spring Seaſon, is hoped for, in a plentiful Manner, and by this Means ſeldom fails the Owner's Expectation. But the Manure of Soot will not anſwer to Profit, if made uſe of in three Sorts of Land, in a looſe light Sand, in Maſh Lands, or in Three or Four-bout Lands; in the Firſt, the Earth is too hollow and ſpongy to retain it long enough on its Surface to aſſiſt the Roots of the Barley; in the Second, the Land lies too flat and wet, to give the ſame Benefit to the Grain; in the Third, the Water-thoroughs are too deep, and the Ridges too narrow, to receive a due Aſſiſtance from ſo light a Body as Soot is; and, when it is waſhed off into theſe Thoroughs, it is in a Manner loſt, becauſe little or no Corns grow here; but, when it is ſown on Barley that is ſown on broader Lands, it will anſwer as I have before obſerved. Secondly, if we dreſs our Barley-Crop with Malt-duſt, we commonly

monly ſow but Twenty-five double Buſhels, or ten Sacks of it over each Acre thus: Out of a Seed-cot, a Man ſows it Broad-caſt, as ſoon as the Barley-Seed is ſown, and harrows in both together; and, if Showers fall in due Seaſon, there is no Fear of a good Crop of Barley; for this is of ſuch an efficacious fertile Nature, that it will mightily aſſiſt the Grain, and add a Benefit in a ſmall Degree to the next Year's ſucceſſive Crop of Peaſe or Oats. But this delicate Manure is more difficult to come by in our Parts of late, than formerly, becauſe a great deal of it is conſumed in feeding dry or fatting Cows, as well as thoſe that give Milk; Horſes that are to be fatted for Market, Working-Horſes, and Swine, inſomuch that it now ſells for one Shilling for every double Buſhel; but there are ſeveral other Uſes, that this Manure may be put to both in Farming and Gardening, that I could name, did it ſuit with my preſent Purpoſe; but, as I am here confined to the Article of *Barley*, I ſhall poſtpone Writing on them, till I publiſh more Works of this Kind. Thirdly, if we dreſs our Barley-Crop with Cart-Dung, it ſhould be of the rotten Sort, becauſe it will the ſooner and better mix with the Seed; and then it may be laid on the Ground, juſt before the laſt Plowing, to be ſpread all over it, and plowed in. When this is done, the next Thing is to ſow the Seed, either on the rough or the ſmooth Ground; on the rough is meant when the Barley is ſown on it as the Plough leaves it: But then it will come in Rows, and be the better haled, or covered from Vermin. Others will harrow once in a Place firſt, and then ſow all their Barley-Seed, and finiſh by twoor three Harrowings afterwards; others will ſow half their Seed on the rough Ground, and when it has been harrowed in, once in a Place, they will ſow the other Half, and harrow it in, twice or thrice long-ways and ſhort-ways, that is to ſay, croſs-

ways;

ways; ſome again will, as ſoon as the Barley is ſown, draw their Cart over the Ground, and lay fifteen, or more, Loads on every Acre, for ſpreading their rotten Dung, with a great deal of Care, that it may cover all the Surface, as near as they can; and indeed, this is a good Way, not only to hinder the Field Fowls, in ſome Manner, from devouring the Kernels, but it will alſo preſerve the Roots very much from the Power of Droughts; if Rains fall in Abundance, they will the better waſh down the Goodneſs of the Dung on the Barley-Roots, and cauſe them to branch and grow into a fine full Crop. Fourthly, if we dreſs our Barley-Crop with the Fold, it muſt be done only in a dry Time, for, if the Fold was to be employed in wet Weather, it would do more Harm than Good, by the Sheep's treading in the Ground ſo hard on the Barley, as to prevent a great deal of it ever coming out: But if the Fold is ſet on the Barley, directly after it is ſown, and the Folding or Penning is carried on in dry Weather, it is the beſt of Dreſſing, for chalky, ſandy, gravelly, and dry loamy Earths; becauſe the Stale and Dung of the Sheep will add ſuch a Fertility to the Barley-Crop, as to make it become a very good one, indeed, for I never knew this Piece of Huſbandry fail its Owners, when carried on in a right Manner; and this may be done for ſome Time, in one and the ſame Field, even till the Barley is three or four Inches high; and, though the Sheep may eat and trample ſome down, yet their Dung and Stale will ſo revive it as to force it on into a moſt quick Growth. This is a common Practice with us in *Hertfordſhire*, and other *Chilturn* dry Countries, and eſpecially, when we ſow our Barley ſo late as in this Month, becauſe now the Heat of the Weather and the ſprouting Spring Graſs, or Clover, or Rye, that was ſown in *Auguſt* laſt, or Turneps that are not all yet eaten off,

will enable the Sheep to dung much, and reſiſt the cold Earth, from its hurting their Bodies; for when Sheep are thus folded ſo early as in *April*, if they are kept on a ſcanty Food, the Earth will be apt to give them the Gripes, or breed the Red-water, and, in this Reſpect, the Loſs may be more than the Profit; therefore, none ought to pretend to fold Sheep on Barley, unleſs they can give them full Belly-fuls, in this Month, of Turneps, Rye, Clover, Hay, or natural Graſs; for, as yet, the Days are ſhort, and the Nights long, and generally wet at this Time of Year, which makes it the more neceſſary, not only to give theſe moſt uſeful Creatures a Belly-ful, but of that Food moſt adequate to their Natures, as Turneps, or Graſs and Hay; the latter, to fix the flaſhy green Meat, and prevent the fatal Effects of too much Humidity; a Quality that is oftentimes the Sheep's Deſtruction, becauſe theſe Creatures, that have the moſt porous Skin or Pelt of all other Animals, are ſubject, not only to ſuffer by the great Quantity of Moiſture or Water they take in at their Mouths, in the Feed of green Vegetables, but alſo by what they receive from Rains, that enter their Bodies, through the large Pores of their ſpongy Skins; for, in ſuch watery and cold Seaſons, that ſometimes happen in this Month, the Sheep are brought under thoſe deſtructive Diſtempers, the Rot, or Red-water; and the more, by the ſudden Sprouting of a Spring, raw, flaſhy, firſt Graſs; but of theſe and many more Incidents, appertaining to theſe moſt uſeful Creatures, I intend to write more particularly of, in a particular Treatiſe for this Purpoſe, different from all others ever yet publiſhed. Fifthly, if we dreſs our Barley-Crop with Rags, it is commonly done when it grows on chalky, gravelly, or ſandy Loams; here the woollen greaſy Rags will do vaſt Service, if they are firſt chopped ſmall, and ſown over all the Land Broad-

Broad-caſt out of a Seed-cot, and a Man's Hand, and then plowed ſhallow into the Earth; which as ſoon as done with a Foot or Swing-plough, or Jockey-wheel Plough, the Barley-ſeed is to be harrowed in; and, as they are of a hollow ſpongy Nature, the Rags will lodge the Rains and Dews, and become a Sort of Watering-pot to the Roots of the Barley and the Earth about them, and adminiſter ſuch a Moiſture to them in theſe hot dry parching Soils, that the Barley-Crop will grow with great Vigour and Expedition in the hotteſt Summers, and not only be ſerviceable to this firſt Crop of Barley, but will inrich the Ground for two or three Years; at leaſt, the Rags will become a Dreſſing for the next Year's Crop of Peaſe, Oats, Thetches, or Tills; for woollen Manure agrees ſo extremely well with this this Sort of dry Land, that the *Ivingboe* and *Edgborough* Farmers buy great Quantities of it every Year, ſome from *London*, others from the *North*, out of *Bedford* and *Northamptonſhires*, for thus improving Wheat and Barley-Crops, that grow in their pooreſt chalky Grounds, even where an Acre of ſuch Land is let for Half a Crown a Year; and, unleſs the Farmers are at this extraordinary Charge for a Manure beſides their Fold-dreſſing, it would hardly, in ſome Years, be worth Plowing and Sowing: But I muſt ſtop my Pen here, for, if I was to write on all the Particulars relating to the Improvement of Land, by Dungs and Manures, it would employ a large Treatiſe; and therefore I ſhall proceed to obſerve

*The good and bad Properties attending Barley-crops that are top-dreſſed in this Month.*— Top-dreſſing of Barley-crops in *April* is a very common Thing, eſpecially in *Chilturn* Countries, becauſe, inſtead of making a Fallow, on Purpoſe for the Reception of Barley-ſeed, we prepare the Ground firſt by a Crop of Turneps, or Rye, or Clover, or

Rapes, or Thetches, or *French* Wheat, *&c.* and by this Means get a Crop extraordinary, more than Vale-Farmers can in their open common Fields, purely for a Crop of Barley, by ſeveral Plowings, that are performed in the Space of very near one Year, before they can ſow their Barley-ſeed. And, where they are obliged to make a regular Fallow, as ſuch Turneps, Rye, or Rapes are fed off by Sheep, they leave ſo much Dung and Stale behind them, as ſerve in Part of a Dreſſing: And, to compleat it, as ſoon as ever the Barley is harrowed in, we either top-dreſs it with ſhort Dung, or with Malt-duſt, or with Soot, or with Peat-aſhes, *&c.* Now, in Caſe a rainy Time preſently ſucceeds the Sowing of the Barley, then the Quinteſſence of ſuch Top-dreſſing waſhes down on the Roots of the Grain, and forces forward a moſt expeditious and vigorous Growth of it, ſo that its early Blades cover and ſhade the Roots againſt the Damage of Droughts as well as the Top-dreſſing itſelf. Thus both the Vertue and Subſtance of it contribute very much to the Perfecting a full Crop of Barley. But, in Caſe a dry, hot, long Seaſon of Weather ſucceed the new-ſown Barley-ſeed, then the Danger is, that ſuch Top-dreſſing does more Harm than Good, by burning up the Blades, or Shoots, of the Barley, and drying its Roots, ſometimes to the Deſtruction of the greateſt Part of the Crop; and the more, as the Barley-ſeed is ſown ſo late as in *April.* Now, the Intent of my writing this Paragraph is, to ſhew and illuſtrate the great Benefit of ſteeping the Barley-ſeed, becauſe it abſolutely prevents all ſuch Damage that may happen to a Barley-crop, by the hot Cover of the Dung, or Manure, and the long Dryneſs of the Weather; for, as the ſteeped Seed carries a deal of Liquor with it into the Earth, it is there reſerved, and becomes a Fund of Moiſture for ſome Time, even to the Forcing on the Growth of the Crop, though

no

no Rain happens for ſeveral Months afterwards; which all will find, as well as I have done, that prepare the Seed according to the Salt-petre Receipt that I have already made public; as to thoſe cheaper ones, I am ready to communicate them to any Perſon for a ſmall Gratuity.

## CHAP. IV.

### *Of* White Oats.

*THE Conveniency that White Oats give a Farmer of ſowing them in this Month.*—The various Natures of Oats contribute very much to a Farmer's Conveniency. The Black Oat is reckoned the hardieſt Oat of all others, and therefore is ſown ſooner than any, and ſo affects an early Sowing in *February*, that that Month is accounted the beſt Month in the whole Year for Sowing it. On the Contrary, a White Oat is of a more tender Nature, and more forward or quicker Growth; which obliges Farmers to ſow them late, even in the Months of *April* or *May*. Now as a White Oat requires a later Sowing than a Black Oat, it gives many *Chilturn* Farmers an advantageous Opportunity to feed their Turneps, their Rye, or their Rapes off late, and yet not be deprived of enjoying a good Crop of Corn at the following Harveſt: For when any of thoſe are fed off by Sheep, Cows, or Oxen, in this or next Month, White Oats may be ſown to a good Purpoſe; and it is by this Means of feeding Turneps, Rye, and Rapes off late, that either rath-ripe Barley, White Oats, or blue, or other tender Peaſe may be ſown in this Month, directly after ſuch a Crop is got off; when it is an unſeaſonable Time to ſow Black Oats, becauſe they will run into Straw or Stalk much,

much, but little into Corn. But White Oats, having a very ſtrong, large, flaggy Stalk and Ear of a great Bigneſs, employ the Fertility of the Earth for nouriſhing theſe its Branches to that Degree, as to hinder its too luxuriant Growth, and prevent the violent Attractions of the Sun's Heat, from leſſening its Multiplying into plentiful Crops of Corn, when the more naked Stalk of Black Oats, if ſown ſo late, would be overcome by them, and be rendered a poor Crop; becauſe the Roots of the White Oat grow under a Sort of Cover or Shade that they receive from the green broad Blades that always accompany their Stalks; which leads me to make Obſervations an that Earth which is moſt proper to ſow White Oats in.

*Of the moſt proper Soil for ſowing White Oats in.*—Not only the Time of ſowing White Oats is to be obſerved, but the Soil alſo is of the greateſt Importance to be conſidered; for, if this Seed is not ſown in a proper Earth, the Labour, Money, and Time will be in a great Meaſure loſt. I knew a *Chilturn* Farmer ſow White Oats in a wettiſh Loam, that returned him, indeed, Straw enough, but the Oats were of ſo thin a Body, that they were next to Chaff; which ſo diſcouraged this Farmer, that he never afterwards ſowed any more White Oats, though his large Farm contained various Soils. On the Contrary, I knew a Farmer that lived at *Bragenham*, near *Leighton*, in *Bedfordſhire*, every Year ſow no other Oat, than the white Sort, becauſe they returned him prodigious Crops off his ſandy Grounds, even to nine Quarters off an Acre, and that of the largeſt Sort of Kernels; but then he kept his Land always up in good Heart, by the Help of the Dung of many Cattle, for this Farmer employed both Grazing-ground and Plowed Ground, which gave him an Opportunity

tunity to keep Abundance of Cattle, and them of returning him Abundance of Dung. Now this Farmer was even neceſſitated to ſow White Oats, becauſe his dry Ground will not bear good Wheat, nor good Barley; therefore he chiefly ſowed Rye, Turneps, and White Oats; and, for obtaining a large Crop of ſuch Oats, he never failed of making Choice of the largeſt and cleaneſt Seed; and it is by theſe Means he uſed to ſell the beſt of Oats from off a pooriſh Earth, as his naturally was; but, when ſuch a Soil of pooriſh Land is enriched by the Dung of Animals, or by Manures, it then in many Parts of *England* agrees excellently well with Barley and White Oats; as is obvious to all who travel through the Counties of *Suffolk*, *Norfolk*, *Kent*, and other Parts, where, if they have Judgment enough to make due Obſervations in their Way, they may ſee great Quantities of ſandy Land ſown with theſe two Sorts of Grain, as thoſe which beſt agree with it; not but that a White Oat will grow very well on Gravels, Chalks, and dry Loams: But the chief Miſtake of all others is, the Sowing them in ſuch Soils that are Strangers to the Dung-Cart, or other fertile Dreſſing; for, to expect a full Crop of White Oats off a poor barren Ground, is the ſame as expecting a Horſe will do as hard a Day's Work, with Part of a Belly-ful of Meat, as thoſe who enjoy a whole Belly-full; yet, as abſurd a Thing as this is, it is the Caſe of many ignorant Farmers, who truſt ſo much to a wet warm Summer for producing them a plentiful Crop of Oats, that they even are careleſs about the Matter; and the more, becauſe Oats will grow into tolerable Crops, when hardly any other Corn will, with little or no Dreſſing; but he who dreſſes his Ground on Purpoſe, or he who otherways keeps it in good Heart,

has

has two to one the better Chance of ſucceeding, as I am going farther to obſerve.

*Of dreſſing Ground for an Oat-crop.*—Dreſſing, as I ſaid, or not Dreſſing Ground on Purpoſe, for obtaining a full Crop of Oats, is not worth Diſputing; the Matter of Fact is, whether the Ground is in good Heart, at the Time of ſowing the Seed; if it is, an Oat-crop may, perhaps, pay as well as a Wheat or Barley-crop, in ſome particular Years when the two latter are cheap and the Oats are dear, as it ſometimes happens to be the Caſe; for ſix or ſeven Quarters of Oats, at ſixteen Shillings a Quarter, may fetch as much Money as Twenty-five, or Thirty Buſhels of Wheat will, at Three Shillings and Six-pence a Buſhel. And, therefore, thoſe Farmers who dreſs or dung their Land on Purpoſe for an Oat-crop, and not for a Wheat-crop, are much in the Right of it; becauſe they not only obtain very great Crops of Oats by this good Huſbandry, but likewiſe deliver their Wheat-crops that are ſown in *September*, or *October*, following the Oat-crop, from the Danger of Smut, and what we call *Pepper-wheat*, and from the pernicious Seed of thoſe Weeds that Stable-dung commonly is mixed with, and breeds on the Land where ſuch Dung is laid to ſupport a Wheat-crop. But, by Dunging the Oat-crop and not the Wheat-crop, if there be weedy Seeds carried into the Field with the Dung, the Danger here is not much, for, *in the firſt Place*, the Oats cannot ſuffer by Smut; nor, *Secondly*, hardly by Weeds, becauſe a full Crop of White Oats will not only prevent the Growth of old ones, but likewiſe of all new ones, and thus preſerve the Land in clean pure Order and Heart, for the Reception of Wheat-ſeed, and forwarding its After-growth with great Expedition. Yet I cannot ſay that this Caſe is without Exception, becauſe, where Oats are to be ſown on a gravelly

gravelly, dry, hungry Soil, that is dunged on Purpoſe for them, in order to ſow the ſame Land with Wheat, as a next Crop, without Dunging, I ſay, this may be of ill Conſequence to the Farmer, becauſe this voracious gravelly Soil may, in the Time the Oats are growing on it, eat up and exhauſt all the Goodneſs of the Dung to the Starving of the ſucceeding Wheat-crop. But, where a Loam, or Sand, or Chalk, and ſuch like dry Earth is dunged, on Purpoſe for an Oat-crop, it may ſo affect the next Wheat-crop, as to produce a very clean, pure, and plentiful one, without any other Aſſiſtance, according to the Practice of many Farmers, who occupy that Sort of Land; which is ſo apt to breed ſmutty Crops of Wheat, that they dare not do any otherways than dung it on Purpoſe and directly for an Oat-crop, to prevent the dire Effects of dunging on Purpoſe and directly for a Wheat-crop. But, what ſhall I ſay of thoſe, who neither dung on Purpoſe for an Oat-crop, nor obſerve to keep their Ground otherways in Heart, for producing a plentiful Crop of them? Why, as they dung, ſo they muſt expect to reap or mow; as a young Farmer proved this Caſe to be true, who (as I have mentioned it in ſome of my former Works) upon receiving his Wife's Portion, took a large, chalky, poor Farm, in *Wiltſhire*, about ten Miles diſtant from *Newbury*, where great Part, if not all his Ground lay on a Hill, expoſed very much to the Power of the Wind and Sun, that ſuddenly increaſed the Dryneſs of his dry Land, whereon he ſowed a great Quantity of Oat-ſeed, without Dreſſing; and, as I remember, he had forty Acres ſowed in one Year, which happening to be a very dry and hot one, it ſo parched up his Oat-roots, that there ſoon appeared a moſt diſmal Sight; inſo-

much that the Crop was judged not worth Mowing: This obliged the young Farmer to turn in his Team of Horſes among the green Oats, which, I think, were nine in Number, to eat and feed on them; ſo that I cannot ſay the Crop was all loſt, but I think it paid this Way the worſt of any, for the Cattle muſt undoubtedly trample down and waſte a great deal of ſuch a green Crop; and, indeed, the bad Management thereof waſted the Farmer's Pocket, for this, and ſome more of his wrong Management, broke him.

*Of ſowing White Oats.*—The Sowing of White Oats deſerves a particular Regard, for there is this Difference between the White Oat, and the Black Oat: The Black will gather and branch much more than a White Oat, and, therefore, if an equal Quantity of Seed was to be ſown on an Acre of Ground, the Farmer may be deceived in his Expectation at Harveſt; wherefore, the *Bragenham* Farmer, I have been mentioning, does not ſow leſs than five Buſhels of White Oats on every Acre, in order to allow for the Deficiency of their Gathering and Branching; which is one more than we commonly ſow in our Loams, when we ſow them with Black Oats, for, with us about *Gaddeſden*, we ſeldom ever ſow, more than four Buſhels on an Acre of theſe Black Oats; but then, whether they be White Oats or Black Oats, they ought to be ſown twice in a Place, over the whole Field; for, as I have obſerved in laſt Month, many obſtinate and ignorant Farmers have ſuffered by ſowing them only once in a Place, as truſting to the Largeneſs of a Sower's Hand, to fling enough out of it at one Throw. And ſuch a double Sowing is of the greateſt Importance, for on the thick Growth of a Crop very much depends the Bigneſs of it at Harveſt, becauſe, by

ſuch

ſuch a thick Growth, the Weeds are overcome and kept down from hurting the Oats; and, likewiſe, the Heats and Droughts kept the better out from parching up the Roots of the Oats, which, in too thin a Crop, often proves fatal to it; for, when Oats are ſown in the Random or Broad-caſt Way, there is no more Mould allowed their Roots than what the Harrows and Roll give them; which, at beſt, is but a ſuperficial and moſt thin Covering, and, therefore, the more liable to ſuffer by Droughts, which is different from the Way of ſowing Oats in Drills.

*Of ſowing Oats in the Drill-way.*—It is true, that, when Oats are ſown in Drills, their Rows ſtand at a conſiderable Diſtance, enough to give the Sun and Air free Acceſs to their Roots for drying them; and ſo they would to the Loſs of the greateſt Part of the Crop, was it not for that Covering of Mould on them which they receive from the Drill-plough, that leaves ſo much on them, that not only ſecures the Oat-roots from the too violent Heats of the Sun, but likewiſe adminiſters to them ſuch a Nouriſhment, as indeed may be called a perfect Dreſſing; for the Salts of their looſe Top-earth, by being waſhed from Time to Time on them, proves ſuch a fertile Aſſiſtance as forces on a large Growth, while the Roots of the Oats lie in great Security againſt the Damage of Weeds or Droughts, and from being robbed of the Goodneſs and Vigour of the Earth, by thoſe Roots of Oats that grow too cloſely together, when ſown thick in the promiſcuous or Random-way on a poor Soil.

## CHAP. V.

### *Of ſowing artificial* Graſs-ſeedss *amongſt* White Oats.

*OF ſowing Clover and other artificial Graſs-ſeeds among White Oats.*—In ſowing all Sorts of Oats, it particularly concerns a Farmer's Intereſt to adjuſt the Quantity of their Seed as well as that of any artificial Graſs, that is to be ſown among them. On this Account he ought well to conſider the Nature and Strength of his Soil. If Oats are to be ſown in a Sand, or a Gravel, or a Chalk, without any Graſs-ſeeds, there ought to be the greater Quantity of Oats ſown, the better to enable the green Crop to lodge and ſhelter the Waters of Rains and Moiſture of Dews, for keeping ſuch dry Earth in a moiſt Condition; but then, if ſuch Gravel, Chalk, or Sand is in ſo poor a Heart, that it is not able to nouriſh and bring ſuch a poor Crop to a full Perfection of Growth, it will ſuffer by growing in ſhort Stalks, and poor lean Ears, and thin Kernels, and is thus the more unfit to be ſown with Clover or any other artificial Graſs-ſeeds. Of this a judicious Farmer is ſo well appriſed, that inſtead of ſowing ten or twelve Pounds of Clover-ſeed on one Acre of Ground, or two Buſhels of Trefoil-ſeed in its black Hulls, or the ſame Quantity of Ray-graſs Seed on an Acre, he will ſow but ſix Pounds of Clover-ſeed, or one Buſhel of either of the other Graſs-ſeeds, being juſt enough for one Feeding down at the next Spring-ſeaſon, with Sheep or other Cattle; and, as ſoon as ſuch a half Crop of Graſs is fed down bare, he will begin to plow up the ſame Ground,

Ground, and fallow for a Crop of Wheat. But, when a Perſon intends to enjoy a Clover-crop, a Trefoil-crop, or a Ray-graſs Crop, for a Year, or two, or three ſucceſſively, his Buſineſs is to take Care that his Ground be in good Heart, when he ſows his Oats and ſuch artificial Graſs-ſeeds among them. Not but that there is a Way to come by a good Crop of Clover, Trefoil, or Ray-graſs, though the Seed is ſown on a poor Ground, and that is this: If artificial Graſs-ſeeds are ſown on a poor Ground that is firſt plowed and made fine, they may take ſo well as to cover almoſt all the Land, and grow into a thick Crop the following Year; but as it is not reaſonable to expect there will be a rank Growth of ſuch artificial Graſs, without any other Help on ſuch poor Ground, a full Dreſſing or Manure of Soot, Malt-duſt, Lime, or Coal, Peat, or Wood-aſhes, or ſome ſuch Sort of Aſſiſtance ought to be put on the Graſs-crop in *January*, or *February* at fartheſt; and then, if a wettiſh Time ſucceeds the Sowing of ſuch Manure, there will, in Courſe, be a large Crop produced of ſuch artificial Graſs; as is ſometimes proved, but not very commonly, becauſe Farmers find it beſt anſwers their Intereſt, when they ſow their artificial Graſs-ſeeds on Ground dreſſed on Purpoſe for a Barley, Wheat, or Oat-crop, for that one ſuch Dreſſing very well anſwers both Ends; that is, to produce both a full Crop of Corn and of Graſs, and this for two Years together where the Land is naturally good; but, if it is naturally poor, then one Year will be long enough. Indeed, in ſome Parts, they let a Crop of one or other, or all together, of theſe artificial Graſſes lie three Years in all in gravelly Loams; but then they take Care to manure the whole Crop the ſecond Year for making it hold out ſo long in good

good Order, and this eſpecially is done on dry Grounds, that will bear the Feet of Cattle without their ſtolching it; and where ſuch artificial Graſs is more than ordinary wanted, as the Caſe is with ſeveral of thoſe Farmers who live between *Hempſtead* and *Watford* in *Hertfordſhire*; and here it is, that they ſow none but Black Oats, refuſing the white Sort, becauſe they would peel and impoveriſh their poor gravelly Soils, much more than the black Sort; but in other Parts, as in ſome Places of *Kent*, *Bedfordſhire*, and other Counties, they chuſe to ſow White Oats before black ones, becauſe they fetch the greater Price at Market, for the Sake of their ſuperior Largeneſs of Body, and delicate Colour; and likewiſe for that particular Benefit the White Oats afford all artificial Graſs-ſeeds that are ſown amongſt them; a Benefit that is very valuable in greatly ſecuring the Clover, Trefoil, or Ray-graſs in their infant Growth, againſt the Powers of Froſts and Droughts; and this by Means of the ſpreading Flags that always grow up with the Stalks of White Oats, more than with Black Oats, which greatly ſhade and ſhelter the Graſs from the Injuries of violent Froſts and Heats; but, in this Management of artificial Graſs-ſeeds among Oats, the Oats ought not to be ſown quite ſo thick as when they are ſown alone; becauſe too much Cover ſometimes kills the ſprouting infant Graſs, which is the Fault of, and what diſcourages many Farmers from ſowing Clover and other artificial Graſſes among Peaſe, becauſe their great Cover deſtroys oftentimes more than nouriſhes a Crop of young Graſs; and ſo does any other Corn-crop in a leſſer Degree that grows very thick, ſo as to choak the Clover, Trefoil, or Ray-graſs, while it is in its *embryo* Condition of Growth;

and

and therefore four inſtead of five Buſhels of White Oats, are enough to be ſown on one Acre, when any or all theſe Graſſes are ſown among them; and then there will be Room enough for Corn and Graſs to grow and flouriſh. The ſame Care ought to be regarded, when Graſs-ſeeds are ſown among Black Oats; where four Buſhels of theſe are to be ſown on one Acre, there ſhould be only three Buſhels and a Half employed, that the young Graſs may not be deſtroyed by too cloſe a Cover of the Oats; and although it may be ſaid, that ſuch artificial Graſs draws ſo much of the Goodneſs of the Ground, as to rob, in ſome Degree, the Oat-crop; yet it may be alſo ſaid, that the Shade and Moiſture, which an artificial Graſs yields to the Roots of the Oats, will compenſate for all Damage that may happen on this Account.———It is not too late to ſow Clover, St. *Foyne*, Trefoil, or Ray-graſs Seed in any Part of *April*; for it may be done very well now among Barley or Oats, and where a Perſon thinks fit to venture his Graſs-ſeed. It may likewiſe be done among Peaſe, as the tender late-ſown Puffin-pea, the blue Pea, or the *Eſſex* Roading-pea, *&c.* There are ſeveral Ways, as I have remarked in laſt Month, to ſow Clover or other artificial Graſs-ſeeds; but this Month, in particular, gives *Chilturn* Farmers a good Opportunity to ſow them by the nine Feet long wooden Roll, by Reaſon this Roll is commonly employed in this Month in the rolling of that Barley and Black Oats which were ſown in *March*, and for ſowing either Clover, Trefoil, Ray-graſs, or *Lucerne* Seed, *&c.* among theſe two Grains; the Way is, juſt before the Roll is to be uſed, to ſow the Graſs-ſeed twice in a Place, and then immediately draw the Roll all over that, and the Barley

ley or Oats only once in a Place, croſs the Broad-lands; for we ſeldom ever draw the Roll twice in a Place, unleſs there be an extraordinary Occaſion for ſo doing, as when the Ground lies more clotty than ordinary; and, if a favourable wet Time happens afterwards in due Seaſon, there may an excellent Crop of ſuch artificial Graſs appear, when the Barley or Oats are mowed off; but, if a long dry Time follow, it may dry up the ſprouting Seed and kill the Crop, becauſe this ſuperficial Way of ſowing Graſs-ſeeds very much expoſes them to this Misfortune. However, there is no Way, ſtrictly ſpeaking, that artificial Graſs-ſeed ſown at any Time, or in any Shape, is free of Danger of being ſpoiled or damaged: If it is harrowed in with Corn in *February* or *March*, the Froſts may overtake it and ruin its Growth; or, if it is Buſh-harrowed in, its Fate may be the ſame; or whether harrowed in, or rolled in, the Fly, or Slug, may devour it, before it has got Strength enough to reſiſt their Rapine. However, the Sowing of Clover, Trefoil, Ray-graſs, or *Lucerne*, by the Roll, in this Month, is the laſt Reſource; and, therefore, all thoſe who would enjoy a Crop of any or all of theſe moſt ſerviceable artificial Graſſes ought to ſow their Seed, at fartheſt, in this Month by the Roll; and, indeed, this Month is the beſt Time of all others, to ſow any of theſe Seeds among Barley in particular, where a Farmer has Reaſon to fear, that, by the Rankneſs or Richneſs of his Ground, their Graſs would grow ſo luxuriant as to choak or cripple the Barley-crop; as the Caſe has often happened to many, when a hot wet Summer ſucceeds the Sowing of it in a rich Soil; but, by this Way of rolling the Graſs-ſeed in at this Time of the Year, he is intirely free from this Sort of Damage, becauſe

becauſe the Barley-ſeed, being harrowed in ſo long before, has the Opportunity of acquiring ſo forward a Growth, as to be able to keep the Clover under, and prevent any ſuch Misfortune.——— St. *Foyne* Seed alſo may be ſowed in this Month among Barley or White Oats, though it is moſt commonly done in *March*. If it is to be ſown among Oats, the ſame Ground ſhould be duly prepared for it, by two or three Winter's Plowings to get it into a fine Tilth; for, unleſs this Piece of forward Huſbandry is well obſerved, there is no great Likelihood of obtaining a full Crop of St. *Foyne*, becauſe this is a large Seed, that cannot be well covered, unleſs the Earth is in a fine hollow Condition, for admitting the Harrow-tines to enter deep enough for the Purpoſe; yet, notwithſtanding ſuch Precaution is duly obſerved of preparing the Ground by ſeveral Plowings, by the better Sort of Farmers, there are others of the worſe Sort, who careleſly venture to ſow this or other Graſs-ſeeds on rough Tilths, and miſs their Crop by ſo doing, like one that told my Son on the 28th Day of *November*, 1743, he wondered his Father would oblige him to plow a Wheat Stubble-field up at this Time of Year, that muſt be plowed again hereafter for Sowing it with Oats and Clover; for that his Practice was, never to plow more than once for Oats and Clover, or for any other artificial Graſs-ſeeds, and, if they hit they hit; if not, it was only the Loſs of the Graſs-ſeed. Now this was a Youngſter, lately put into the Management of a very great Farm that his Father owned, and he had been bred up in all his Life, yet poſſeſſed with ſuch an abſurd Notion as this. But the ſame young Man was not much wiſer on another Account, for this laſt Summer, having ſown a large Field with Turnep-ſeed, it took all

over very well, which made him bargain with a Company of travelling Turnep-houghers, to houg this Field at the Price of five Shillings an Acr and they fell to work directly on the ſame, but co tinued there only one Day for the preſent, by reaſo he did not make a ſtrict Bargain with them, not t leave off till the Whole was finiſhed, which gave them Room to take another Man's Turneps in the ſame Manner. Now it happened that a very dry, hot Seaſon came on the young Turneps, that plainly diſcovered the Crop would ſet, or what we call *burn* or *ſpoil*, if it was not houghed in due Time; and, as Houghers were therefore very ſcarce, theſe Workmen went about to take and ſecure all the Turnep-houghing they could to themſelves, and thereby occaſioned many Acres of them to ſpoil, for Want of houghing in due Time; for all the Houghings they gave the Turneps, after they were thus ſet, were to little Purpoſe; for, the dry Weather continuing a long Time, the reſt of this Field was not worth hardly ten Shillings an Acre, when the firſt Acre that was houghed in Seaſon was worth thirty Shillings; for the latter Sort was ſmall, hard, and ſticky, and unfit either for Boiling, or for Feeding Sheep on them. But this young Farmer is one of that Number who are beſt taught to do better by their own Harms. Now to return to my Subject of ſowing artificial Graſs-ſeeds, I have here further to add, that, when we ſow *St. Foyne-ſeed* among Barley or Oats, we never ſow this great Seed by only Rolling it in: No, this is too big a Seed to be covered by merely Rolling it in; therefore we always harrow it in, when ſown in the random or broad-caſt Way, and yet roll the Grain, and this ſome Time afterwards, when the Barley or Oats are high enough for the Purpoſe. But *St. Foyne-ſeed*, as well as *Lucerne-ſeed*, are indeed beſt ſown out of the Drill-

plough

plough in Drills, becauſe here it will grow in a more certain and fertile Manner, than when it is ſown among Corn, where it is ſubject to be ſpoiled by Weeds, and the Fall and Cover of ſuch Corn, that in hot rainy Summers, in a rich Soil, ſeldom fail of falling down, and being laid flat before Harveſt, and then the young *St. Foyne*-crop, in all Likelihood, will be ruined. But, when the Seed is ſown in Drills, the Earth has nothing elſe to do, than to only nouriſh the young *St. Foyne*, which it will ſufficiently do of itſelf, without the Aſſiſtance of any auxiliary Dreſſing or Manure, and, with the Help of the *Dutch* Hand-hough, will alone nouriſh it for many Years together afterwards; for, when the Seed is thus ſown in Drills, the looſe Earth, that falls down directly on it, will not fail to ſecure it againſt Froſts and Droughts, and receive and lodge the Rains and Dews in ſo plentiful a Manner, that the young *St. Foyne* will grow into large ſtrong Stalks with great Expedition, as having been preſerved in its Seed from not only theſe Caſualties of Weather, but likewiſe from devouring Flocks of Pigeons, Rooks, and other Field-fowls, who have great Opportunities of eating up a great deal of this large Graſs-ſeed, when ſown in the promiſcuous or random Way, and then ſuch Damage is the more, as this Sort of Seed is ſown to produce a laſting Crop. But there are ſeveral other Encouragements for Sowing this large Graſs-ſeed in the Drill Way, rather than in the random Way; which I ſhall forbear mentioning here, and only ſay, that one Buſhel of it will better ſow one Acre of Ground in the Drill Way, than ſix Buſhels will in the random Way; for it is plain, that the laſt Way of ſowing is ſo hazardous, that Farmers frequently miſs of having full Crops of this Graſs, by Means of the many Accidents attending ſuch broad-caſt Sowing, when that

Seed ſown in Drills lies intirely ſecured from them. Now, to ſow *St. Foyne*-ſeed in Drills, the Diſtance of them may be made to a Perſon's Fancy. It may be ſown from ſix Inches Diſtance to eighteen; the further off the Drills, the leſs Seed, for then leſs than half a Buſhel will do; and what is very worthy of great Obſervation in this Caſe, there is no Occaſion for a Farmer to be at the Charge of twenty Buſhels of Soot to ſow over his young *St. Foyne*-crop, the ſecond or third Year of its Growth, as is the uſual Cuſtom with all our *Hertfordſhire* Farmers who ſow this Seed in their chalky Lands, or ſo many Coal *London* Aſhes, or Peat, or Wood Aſhes; becauſe the *Dutch* Hough may be employed every Year, or every ſecond Year, in raiſing Earth in the Interſpaces between the Rows of *St. Foyne*, killing deſtructive Weeds; and, by laying ſuch Earth to the Roots of the *St. Foyne*, it will nouriſh them in an ample Manner, without any other Aid or Aſſiſtance from Dungs or Manures, and, indeed, is a greater Nouriſher of Crops, than moſt Perſons think; as is evident from thoſe Wheat-crops ſown in the random Way on fine Tilth Earths, which oftentimes produce large Crops, without any Dung or Manure whatſoever, merely by the Help of extraordinary pulveriſed Land, even better than ſome that is rough and ſowre, when the Wheat-ſeed is ſown in it, and well dunged beſides. *Lucerne* likewiſe may be ſown in Drills out of a Drill-plough, by Means of a Seed-box made on Purpoſe for it; for, as this Seed is hardly any bigger than Clover-ſeed, none of the Corn Seed-boxes will do it; and, when *Lucerne*-ſeed is ſown this Way in Drills, the Crop is much more certain, than when the Seed is ſown in the random broad-caſt Mode of Sowing it, which is ſo uncertain, that many loſe the Benefit of ſowing this ſmall Seed this Way, by the

the Fly, the Slug, and the Accidents of Weather and Weeds; for, in the common broad-land Way of ſowing *Lucerne*-ſeed, the Twitch or Couch-graſs and other pernicious Sorts, in the ſecond or third Year, generally get up and begin to choak, and, in Time, kill the *Lucerne*-crop. But, when *Lucerne* is ſown out of the Drill-plough in Drills at a Foot aſunder, then the *Dutch* Hand-hough may be employed between the Rows of this Graſs now and then, to kill and prevent Weeds, and mould up the Roots of the *Lucerne*; and, when this is duly done, there is no Fear, but that a Farmer may enjoy the Benefit of ſuch a *Lucerne*-crop many Years in Perfection, without the Help of any Dung or Manure. However, this is certain, that all drilled Corn-ſeeds, or Graſs-ſeeds, will thrive and proſper, and ſo will their Crops, with far leſs Dung or Manure, than when they are ſown in the common broad-caſt Way of ſowing them. And I further aſſert, that all Annuals, or Corn-crops produced by Seed ſown every Year in Drills, will proſper without any other Aſſiſtance, than what the Horſe-break, or *Dutch*, or other Hand-hough may give them; as is evident by the many Wheat, Barley, and other Crops produced by the Help of the Drill-plough and theſe Inſtruments. But then ſuch Corn-ſeed muſt be ſown every Year in freſh Land; that is to ſay, in the middle Part of a new Interval, which always lies between the laſt drilled Corn in a flat Situation of the Land, and not in Ridges of any Kind.

CHAP.

## CHAP. VI.

### *Copies of Letters.*

*The Copy of a Letter from a young Man that the Author recommended as a Ploughman to a Gentleman.*

*SIR,*

I AM very ſorry I cannot acknowledge your Kindneſs, as I heartily wiſh I could; but, becauſe the Strictneſs of my Place will not permit me, I therefore muſt deſire to be excuſed, until Opportunity offers, when I ſhall endeavour to perform the ſame to my greateſt Power, which would give me great Satisfaction. I have but a poor Place; but, as I have a good Maſter, who gives me good Encouragement, I can better bear with it. I have lately been very ill of a Fever and Ague; but, having a good Miſtreſs, who took great Care of me, am ſince, Thanks be to God, reſtored to good Health. I have lately been confirmed by the Biſhop, and ſince have received the bleſſed Sacrament to my preſent and future Happineſs. I hope you are all in good Health, as I am at preſent; I ſhould be glad to hear from you, when Opportunity offers, how you all are, which would give me great Satisfaction; we have a poor ſandy Soil, and very hilly, and therefore we make Uſe of a Sort of Swing-plough, which exceeds all others I ever ſaw, for its Lightneſs and Cutting a fine ſhallow Furrow, which makes it the propereſt for a poor thin Soil of any Sort of Earth; for this Ground is ſo poor, that it will hardly produce above three or four Crops, before it muſt be laid down to reſt for Paſture two or three Years together, this being a Sort of Soil that, ſooner than moſt others, gets into a good

a good Paſture, becauſe of its ſandy Nature, which anſwers to Profit near as well as Rye and Oats, that are the moſt proper Grains for this Sort of Earths, which will hardly produce any other, unleſs it be much improved by Turneps and Clover, that are the greateſt Improvers of ſuch Land; for, before theſe Improvers were practiſed here, our ſandy Soils would yield no other than Rye and Oats, and with theſe Sorts their Markets were chiefly ſupplied; but, ſince theſe Improvements have been made, we have great Plenty of Wheat and Barley in the greateſt Part of this Country. But the Improvements we make by ſowing Turneps is extraordinary; for this Sort exceeds all others for improving our Land, deſtroys all Manner of Weeds, and at the ſame Time much improves the Land, and is our chief Food for fattening Cows and Sheep, and affords us fine Meat, becauſe of their wholeſome Quality. This Sort is commonly ſown in their fallow Year, after two, or three, or more Plowings, according to your Way; and the following Crop is Barley and Clover, and then Wheat or Rye, and then Oats, or it is laid down for Paſture for two or three Years or more, and then they often muck it for Wheat, if it requires, about *Michaelmas*, when they intend to ſow it. Another Improvement is of Turneps and Rapes; theſe two Sorts are ſometimes ſown together for a late Crop, when they do not intend to hough them, and afford a fine plentiful Crop, which very often exceeds a ſingle Crop of Turneps, becauſe they ſtand two Chances; if one miſſes, the other hits; but, if they both hit, they exceed the former, becauſe the Rapes commonly run above the Turneps, by which Means they afford two Crops; but when the Rape is ſown by itſelf, as ſometimes it is, it anſwers very well,

and

and much improves the Land, as alſo for Fattening of Sheep. From, *Sir*,

*Pleaſe to direct for me at*
*in* July 24, 1743.

*Your obliged humble Servant.*

## *Remarks on this Letter.*

THIS young Man I ſent to a Gentleman (a Stranger to me) in the *North*, in 1742, who lives about a hundred Miles from *London*; where he behaved ſo well the firſt Year, that he is hired to ſtay in the ſame Place another, for greater Encouragement than he received before, becauſe he is a ſober, virtuous, diligent young Man, well qualified in the Plowing and Sowing of various Soils, and performing moſt other Works in the Farming Buſineſs in great Perfection; and hereby he has given me the Satisfaction of anſwering the Character I gave the Gentleman of him, which is not a ſmall Pleaſure to me, nor a little Benefit to him; for, as he lives with a Perſon that is reputed to be one of the beſt of Maſters, it will undoubtedly redound to his Advantage, as well as my Reputation. And altho' he has, as he ſays, a hard Place of it (I ſuppoſe of the Working-part) I am not ſorry to hear it: It is what I act myſelf towards my own Children and Servants, for I *collar* the firſt (as our Country Term is) as early as poſſible; that is, I bring them up to work as ſoon as they are able to do any Thing, and continue ſo doing, the better to fit the Back to the Burthen; for, when they are accuſtomed to labour in their Youth, Work becomes the eaſier to them afterwards. I have a Boy, but ſixteen Years of Age, that thraſhes me Wheat, Barley, Oats, Peaſe, Beans

Beans, or Thetches; and who, in *October* 1743, thraſhed me out five Buſhels of Hog-peaſe in one Day, and threw them out of the Chaff; and, tho' he is my Son, I favour him not, in Reſpect of Confinement and Labour; but, for his Encouragement, I give him ſmall Wages: By this Means he is always in his Sphere, when he works hard. I have another Son, my Ploughman, that is ſo naturaliſed to Fatigue, by bringing him up in this Manner, that, if he is kept idle but one Day in the Houſe, he proteſts it is more diſagreeable to him, than Labouring all that Time. My Servant alſo, by my Son's Example of cloſe Application to Buſineſs, keeps him Company at the Labouring-Oar; and, if he was a negligent idle one before, he now becomes pliable to Work. And to make ſure of a Day Labourer's performing equal Work with my Son in making and plaiſhing Hedges, Thraſhing, *&c.* I pay him half Wages; that is, I give him Half what he and my Son earns for that or other Work that admits of Meaſuring. But the Conveniency of all this does not end here, it fits them the better for other Service hereafter; and, as I help Gentlemen to Servants, I endeavour to ſend ſuch as underſtand Work, and will diligently perform it in Huſbandry Affairs: And I have the Happineſs to ſay, I never yet came off with any Diſreputation this Way. Not but that I may, as well as others have done, ſend a Servant that may not anſwer my Character, as not being able to anſwer for future Behaviour; but, if any Gentleman leaves the Choice of one to me, my Endeavours ſhall not be wanting to recommend one that will give Satisfaction. And if a Perſon has a Mind to have one that can hold the Drill-plough, and employ the profitable new invented Horſe-break, *&c.* it may be worth ſuch a Gentleman's While to be firſt at the Charge of a Guinea, on Purpoſe to have a Plough-

man qualified to manage these advantageous Instruments before he comes to him (if he is not already) which I will undertake to get him learned, and be Master of in one Week's Time; for when a Servant has been hired, and lived as a Ploughman before, to hold and work common Ploughs, he will presently and easily learn to hold the Drill-plough, and work the Horse-break, *Dutch* Hand-hough, *&c.* and perhaps, on this Account, the Guinea so given may prove the best Money the Gentleman ever laid out in the Farming Business. I have since received another Letter from this young Man, dated the 17th of *August* 1743, wherein he very judiciously gives me a further and valuable Account of their Farmers Management in the Country he lives in.

*The Copy of a Letter from this Author to a Gentleman, concerning the Uses of burnt Clay, and several other Matters.*

*SIR*,

A Letter, dated the 19th Instant, I received from your Bailiff, and have here sent you an Answer to the same, as I have done to two others before to him, and rode near twenty Miles to find out a Man to burn you Clay into Ashes; and should be very glad to make Use of all Opportunities to do you Service, since I met with an Encouragement for it, from Mr. ————, who gives you the Character of a worthy Gntleman.

Your Bailiff tells me, in one of his Letters, he could never have believed Clay could be burnt into Ashes, had it not been for my Books. But, as he is now convinced of it, by burning large Quantities, he writes me Word he is at a Loss how to apply them. This, therefore, is to let you

you know; that, as I have burnt Clay myſelf, ſeen it done by others, and the Aſhes made Uſe of, I have to acquaint you, that there are ſeveral excellent Uſes that theſe Aſhes may be put to, provided they are rightly managed; but, before I come to theſe Particulars, I would obſerve, that, although the Burning of Aſhes may anſwer to very great Profit, when done on a good Account; as, where a Pond, a Cellar, a deep Ditch, or ſubterranean Drains are to be made, or Ant-hills, or other Excreſcences of Earth, are of Service to remove from off the Spot of Ground; in any of theſe Caſes, if the Soil is a Clay or other auſtere rough, ſtiff Earth, it may be of vaſt Service to burn it into Aſhes; and it is by far better put to this Uſe than to be at the unneceſſary Charge of carrying it away to diſtant Receptacles, or other Places, where, perhaps, it might lie a Nuſance or uſeleſs. But to ſpoil a ſerviceable level Surface, by digging into it and making and leaving Pits open, purely for the Sake of getting Clay and burning it to Aſhes, may be of very ill Conſequence; and, to prevent Miſchief from open Pits, the new Invention took its Riſe of digging only a round Hole of three Feet Diameter, enough for a Tub to be let down, and drawn up with Chalk, for chalking our *Hertfordſhire* plowed Fields; and this Hole we now commonly make in a Hedge, on Purpoſe that it may be the more out of the Cattle's Way, to prevent any Danger of their falling into it. Whereas, heretofore, we uſed to make and leave large Pits, perhaps, fifteen, twenty, or more Feet wide to come at our Chalk, and this in the Middle, or ſome other open Part of a Field, which has occaſioned many Misfortunes; I knew two Horſes ſpoiled, by falling into them. However, the Burning of Clay is certainly of great Uſe, where it can be done to Conveniency

and Profit, and therefore it comes more and more into Practice, as Denſheering or Burning only Graſs-ſurfaces two, three, or more Inches deep does leſs and leſs; becauſe the Upper *Stratum* of ſuch Graſs-ground is the beſt and richeſt Part of it; and to burn this into Aſhes for a Manure may, probably, by the fertile Salts of it being burnt and looſened from ſuch Earth, produce three or four good Crops of Corn ſucceſſively; but, afterwards, Barrenneſs with a Witneſs muſt enſue, till there be more Money laid out for great Quantities of Dung or other Dreſſing, than the Aſhes of ſuch a Surface availed. This old, ſilly, ſhort-ſighted Piece of Huſbandry is now held in ſuch Contempt of burning only Surfaces into Aſhes, that, did a Perſon go about to perſuade a *Hertfordſhire* Farmer to ſuch a Practice, he would take that Man to be either a Fool, or one that deſigned his Ruin. This leads me to remark, that ſuch an evil Practice may be put out of any malicious Tenant's Power, if it is ſpecified in an Article or Leaſe by a penal Covenant, that he ſhall not burn any Surface of Earth (without the Landlord's Leave in Writing under his Hand firſt obtained) for the Sake of the Aſhes it will make for producing an extraordinary preſent Crop, leſt he, near the Expiration of his Time, do this, to get out the Heart of ſuch Ground, and leave it in ſuch a poor Condition for the next Tenant, that the Landlord muſt ſink his Rent to get one; not but that there is Room for Exceptions even on this Account. Where Heath-ground, Ruſh-ground, or ſuch like is to be converted into a better Sort, then, indeed, Burning ſuch a Surface may be abſolutely neceſſary to deſtroy the Roots of Furz, Fern, Ling, Flag, or Ruſh, and for making Way for the Plough to get Crops of Corn

Corn in their Place, or good Graſs to ſucceed in their Room. For this Purpoſe there is more than one Way to burn Clay into Aſhes; one is, by burning it in a Heap in the open Air, as we do Peat, with the Help of Roots, Faggots, or other Offal-wood and ſome Turf or Mould put next on it, to kindle and light the Fire, till it burns into the Clay; and, then only with a gradual Increaſe of Fire, and Cover of dry or wet Clay, or both, on the Outſide of the Heap to enlarge the Quantity of the Clay and keep the increaſed Fire at the ſame Time from Burſting out, the Workman may carry on his Burning with Safety till he has burnt Hundreds of Loads of Clay in ſuch a Heap, for ſo vehement is ſuch a confined Fire, that it has burnt Flint-ſtones to Powder, much more a Clay, that is of a ſofter Body; but as I have already in ſome of my former Works been particular in Writing on this Subject of Burning Clay in the open Air in a Heap, which is the only Way practiſed by Farmers, and ſome Gentlemen, as a cheap and very ready one; I ſhall not ſo much enlarge on it as otherwiſe I would do, but obſerve, that the Burning of Clay in a Clamp is, by two Authors, recommended as the beſt Way of all others; and that the Burning of Clay wet is much better than when burnt dry, for Reaſons the Author on improving Clay-ground aſſigns; but, for my Part, I know of none, as yet, that burns Clay for Manure in a Brick-clamp, and therefore ſhall here only remark, that, when Clay is burnt to Aſhes, ſuch Aſhes are not to be carried into the Field as they are, and as ſome have done, and laid them in a promiſcuous Condition on the Ground; no, this would be perfectly wrong Management, and have the ſame chargeable Effect, as happened to two ſeveral Gentlemen

men through the Ignorance of their Bailiffs, who carried their Clay-aſhes, and ſpread them over the Graſs-ground they were to improve, as they were burnt, without firſt ſeparating the groſs Sort from the fine; and thus Pieces of burnt Clay, like little Pieces of Brick-bats were laid over the Graſs-ground, in Aſſurance that the Froſts would ſhoal and diſſolve them; but, on this Account, their Expectation was deceived, for theſe Pieces of burnt Clay had too much of the Clinker Nature in them, to diſſolve by Weather, at leaſt, not in a very little Time; which obliged the Owners to be at the Charge of having them picked off the Graſs and carried away. Therefore, when my Affairs will permit me to wait on you at your Seat, I will ſhew your Bailiff a new Method of applying theſe Aſhes in a far more profitable Manner than hitherto has been done by any Perſon I know, beſides one particular Gentleman's Bailiff, who moſt commonly every Year burns more or leſs of theſe Aſhes; for to burn Clay into Aſhes, and not know how rightly to apply them, is but doing the Work in Part. In the mean Time, I ſhall in the next Place acquaint you with an Account of the famous Drill-plough, Horſe-break, and *Dutch* Hough.

A Gentleman, altogether a Stranger to me, living about ſixty Miles diſtant from *London*, on reading, in my Monthly Books, the great Benefits I have in them ſet forth, that will accrue to all Occupiers of proper Soils that make Uſe of the Drill-plough, Horſe-break, and *Dutch* Hough, ſent me an Order lately, to provide theſe two firſt Inſtruments with all Expedition; accordingly I beſpoke their Making of the original Makers, to be compleatly made in three Weeks Time at fartheſt. In the mean Time, the Gentleman wrote to me to deſire, I would inſtruct his Bailiff in their

Uſe

Uſe, and he would ſend him to where I ſhould appoint. He came, and I ſhewed him various Fields of drilled Wheat at a Foot Diſtance each Drill, and others ſowed with Barley, Peaſe, and *Lucerne* Graſs in Drills out of the Drill-plough. The Wheat, the Barley, and the *Lucerne* Graſs were kept clean houghed, ſo that hardly a Weed was to be ſeen in the Intervals, by the Help of the *Dutch* Hand-hough; but the Peaſe were (and ſo are Horſe-beans) aſſiſted by the famous Horſe-break, being a new-invented and moſt excellent Inſtrument for ſaving the Charge of Hand-houghing, and forcing on the Growth of prodigious Crops, even in dryiſh Summers; for this double, but very light Machine, rakes and breaks the Earth between the Rows of Corn, and turns it on the Roots of them, being an improved Invention on the moſt ingenious Mr. *Tull*'s Horſe-hough Plough, and is now made Uſe of by many common Farmers, as their Jewel-Tool, for enabling them to get Crops to pay their Rents and live well. And, therefore, I recommend the Drill-plough, Horſe-break, and *Dutch* Hand-hough, as extreme profitable Implements for uſing in ſome of your dry Soils, for I am ſenſible, the large Farm, you have lately taken into your Hands, abounds with ſeveral Sorts of Earths. I have ſent ſeveral of theſe Inſtruments to foreign Parts, as well as to Gentlemen in *England*, for improving their Eſtates, in the cheapeſt Manner poſſible, where the Soil will admit of their Uſe; and this I aſſert as Matter of Fact, becauſe in a clean ſandy Loam, a gravelly Loam, a chalky Loam, or in an intire dry Loam, and ſuch like Land where a Drill may be commodiouſly made, if a Perſon thinks fit, he may carry on the Cultivating, Sowing, Reaping, and Mowing of Corn and artificial Graſſes, without the Aſſiſtance of any other live Cattle than Horſes

or

or Oxen; and, as great an Improbability as this may appear to ſome, I can prove it to be true by ocular Demonſtration to any Perſon that ſhall think fit to be at the Charge of being thus informed of the Truth on the Spot. But what is farther extraordinary remarkable in this new Sort of Drill-Huſbandry is, that all Dung or Manure, uſually laid on Corn-lands for improving their Crops, may be wholly appropriated to the Enlarging of Graſs-crops; for, in this new Way of Farming, the Corn-crops want it not, and, therefore, all Dung and Manure, that may be made, has here an Opportunity to be employed on Meadow-ground, or where Clover, or other artificial Graſs-ſeeds, or Turneps, or Rapes are ſown in the Random or Broad-caſt Way. Thus a Gentleman, or Farmer, whoſe Land is agreeable to this new Huſbandry, may carry on this Buſineſs in a moſt cheap Manner, as being in no abſolute Want of live Stock more than Horſes; but I am ſenſible, that in this Caſe there will ariſe a Queſtion, how Crops of Corn, *&c.* can be nouriſhed without Dung or Manure? To this I anſwer, That, the twelve Inches Interval of Earth between the Rows of drilled Corn being moſt carefully kept weeded and cleaned by the *Dutch* Hand-hough, the Mould, raked by this Means from Time to Time on the Corn-roots, will prove a ſufficient *Pabulum* or Nouriſhment to them for producing large Crops. And when the Wheat or Barley is to be ſown next Year, without any Dung or Manure in the ſame Field, the new Drills muſt be made in the Middle of the laſt Intervals; and thus every Year new Seed may be ſown in new and freſh Ground, by which Means the Wheat will be delivered from that pernicious Diſeaſe incident to a Wheat-crop, when dreſſed with Dung, called *Smut*, and likewiſe from that called *Pepper-wheat*, if the Seed is clean

clean, when ſown; but was I to enumerate all the Advantages appertaining to the Sowing of Grain, artificial Graſs-ſeeds, Turnep-ſeeds, *&c.* in Drills, I might enlarge to the Number of above Thirty.

I have lately diſcovered four Sorts of excellent Wheat-ſeeds, never yet ſown in *Hertfordſhire*; two whereof excel the old common red *Lammas*, that has carried the Bell Time out of Mind, for making the fineſt of Flour; but theſe two make finer than that, as I have heard ſome capital Bakers and Farmers affirm to be true. A third Sort I have ſeen grow in Drills, made by the Pulley Drill-Plough, that carries a great Number of Corns in a very thick bunchy Ear, I believe as many again as ever grew in a *Lammas* Ear; and, as I remember, the Gentleman Owner told me it was a *Turky* Sort of Wheat, but, being the firſt Time of Sowing it in 1742, he was at a Loſs then, to let me know the true Nature of it. The fourth Sort is, likewiſe, a foreign Grain, lately introduced into this Nation, whoſe Character was ſent me by a Gentleman, a perfect Stranger to me, out of a pure Love to his Country, as knowing me capable of ſpreading the Knowledge of its excellent Vertues throughout the Nation; which are, that in ſandy, chalky, gravelly, or dry intire Loams, this Wheat may be ſown to great Profit, but not till the Month of *March*, and yet will flouriſh and be ripe at the ſame Time other Wheat is. And, what is farther extraordinary of this Wheat, he ſays, it will be as good a Crop in ſuch poor Soils, as other Wheat will in rich Soils, as by his Letter to me he affirms to be true. If ſo, it muſt be of vaſt Service to this Nation to ſow it in *March*, as ſoon as a Crop of Turneps, Rye, or Rape is eaten off. Now all theſe

Sorts of Wheat are nearly alike in their Bodies to our common Sorts, and, as the firſt two Sorts make finer Flour and Bread, than common *Lammas* Wheat-flour does, they will, in Courſe, ſell in our Markets before all others; and as the fourth Sort out-does all other Wheat-ſeed in *England* for ſowing late in a poor Soil, ſurely, if any cay afford to buy it, and have an Opportunity of ſowing it in a proper Soil, and do not, they are wanting to their own Intereſt; Gentlemen eſpecially, becauſe, in neglecting this, they are neither their own nor their Tenants Friends.

I am Maſter of an excellent Secret, that intirely prevents the Slug, or naked Snail, and Fly, from eating and ſpoiling young ſeedling Turneps, Rapes, Weld, Flax, and many other Vegetables, both in Fields and Gardens, in their infant Growth; and, although it ſhould rain a Month together, this Antidote will not loſe its Vertue, becauſe it is no Powder, but will do the Feat infallibly, and nouriſh the Crop at the ſame Time to great Perfection.

I have, likewiſe, a moſt valuable Way to prepare Wheat-ſeed without Brine, which gives the Farmer a great Deal of Trouble, and a conſiderable Charge, beſides Loſs of Time; but this Way compleats the Managing and Preparing of two Buſhels and a half or three Buſhels of Wheat-ſeed for Sowing in a Quarter of an Hour; will deliver it from the Danger of Smut or being Pepper-wheat, greatly nouriſh it, and hinder the Worm's Miſchief. A Way I always follow myſelf, and have conſtant Succeſs by it, and all for the Sake of Two-pence Charge for curing ſo much Wheat as ſows one Acre. For Barley-ſeed I have alſo ſeveral Ways of preparing it for Sowing, for leſs

than

than Six Pence an Acre's Charge. Now all theſe, and Hundreds of more uſeful Secrets, I could publickly diſcover for improving Huſbandry; and therefore all Gentlemen, in particular, ought to encourage the Communicating them, becauſe Gentlemen are more liable to be impoſed on than Farmers, as they are obliged to do their Buſineſs by a Steward, a Bailiff, or Ploughman. It is on this Account, I ſay, he ought to qualify himſelf with ſo much uſeful Knowledge, as may enable him to make a tolerable Judgment when a Thing is done well or ill. And as there is a moſt dangerous Tenet or Principle reigning in many of the common poorer Sort of People, *viz.* That it is no Sin to filch or ſteal from a rich Man, becauſe he can afford to ſuſtain a Loſs: —It highly concerns a Gentleman that occupies his own Land to have his Wits and his Eyes about him, to prevent Impoſitions, and take all Occaſions to improve his Eſtate in the beſt Manner poſſible, to balance the ſeveral Loſſes they are more than ordinary liable to. And here I muſt obſerve, that one great Security, againſt the Thievery and Rapine of Travellers and the worſe Sort of People, is for a Gentleman to be affable, kind, and benevolent to his Neighbourhood in particular, for by this Means they will not only be obliged to do ſuch a Benefactor all the Good that lies in their Power, but endeavour to prevent others doing him any Harm; for, as they are many and he but one, they may ſee and prevent that which neither he nor his Servants can. I heard a Gentleman ſay, he feared ſuſtaining no Damage from his Neighbours, by Reaſon he always did them what Service his Conveniency permitted him. I could enlarge very much on theſe Particulars, but I preſume you will think I have been tedious and too free already;

which, in Hopes you will excuſe, I ſubſcribe my ſelf,

*Sir,*

*Your moſt obedient humble Servant,*

*to command,*

*Little Gaddeſden, Auguſt 25, 1743.* **W. Ellis.**

To ——— Eſq;

*The Copy of a Letter from this Gentleman to the Author.*

*S I R,*

I Am very much obliged to you for your Letter of the 25th Inſtant, and for the Hints you were ſo kind to give me in it, touching the Manner of uſing burnt Clay; and, when I have made Trial of it, I ſhall let you know what Succeſs I may meet with therein.

If your Affairs ſhould bring you my Way at any Time, either in Town or Country, I ſhould be extremely glad to ſee you. I am

*London, Auguſt 31, 1743.* *Your very humble Servant.*

*The Author's Remarks on this Letter.*

This Gentleman I, as well as moſt, if not all others that know him, account one of the moſt accompliſhed Perſons we have at this Time in *England*; as the great Buſineſs, he weekly very honeſtly, diligently, and accurately diſpatches, declares

declares him likewiſe to be, to the Satisfaction of all who have to do with him, in the particular and momentous Sphere he acts in: Yet in Farming or Huſbandry Affairs he is, in ſome Meaſure, a Stranger. However, being a Gentleman of better Senſe than to prefer Pride to Humility, he condeſcends to conſult ſuch an inferior Perſon as I am; who, although I bear no Compariſon with him in Reſpect of his great Eſtate and Learning, it it plain, he is not above adhering to the Advice of a Man, that has acquired his Knowledge in the Art of Agriculture, by chargeable Travelling, long Experience, Converſation, and Study; and ſerviceable Advice muſt be of the greater Importance to ſuch a Gentleman in particular, becauſe his Town Affairs oblige him to be hardly above one Day in the Week at his Country Seat, and, therefore, he is neceſſitated to truſt the more to the Management of his Bailiff, whoſe Conduct he will become the better Judge of, as he increaſes his Knowledge in rural Affairs, by reading Books on this Subject, and conſulting their Authors; and this he has the greater Encouragement to do, as he occupies a very large Farm at this Time of his own, ſituated within a Day's Journey of *London*, that gives him not only an Opportunity of enjoying a healthful Recreation, but likewiſe may furniſh his Town-houſe with Variety of freſh, wholeſome, and delicate Proviſions to his great Profit and Pleaſure; which, if I was here to enumerate, it would employ my Pen in a longer Diſcourſe than I can at this Time conveniently write.

CHAP.

## CHAP. VII.

### *Of Peaſe to be ſown in this Month.*

*OF the particular Sorts of Peaſe requiſite to ſow in* April.—This Month gives many of the *Chilturn* Farmers an Opportunity to improve their Land, by ſowing it, at this Time, with a Sort of Peaſe proper for the Seaſon of the Year; for on this very much depends the Succeſs of a Pea-crop; a Truth often proved by the fatal Effect of a wrong Conduct, when it is employed in ſowing that Sort of Peaſe in *January*, *February*, or *March*, which ſhould not be ſown before this Month, becauſe their tender Nature renders them unable to withſtand the ſevere Aſſaults of Northerly and Eaſterly Winds, which in theſe Months generally blow in a more nipping and ſharper Degree than at any other Time of the Year. From hence it is, that, though the Soil is duly prepared, and the Seed got in Perfection, and the Sowing of it performed in the beſt Manner poſſible, yet all this will not ſecure a plentiful Crop of Peaſe, if the Farmer ſows a wrong Sort at an improper Time. After many Years Experience, we *Hertfordſhire* Farmers have found none to anſwer our Intereſt ſo well as the Horn-grey Hog-pea, the Maple, the Blue, and the White. It is theſe four Sorts that we chiefly ſow in our incloſed Fields, in Refuſal of all others, becauſe we find, by repeated Experience, that theſe beſt agree with our various Soils, when ſown, in a proper Manner, at the right Time of the Year. If we ſhould ſow a Horn-grey Pea in *April*, the Farmer would deceive himſelf in his Expectation of a Corn-crop, becauſe, inſtead of that, he would get little elſe but Straw; for this Pea is of ſo hard a Nature, and ſo ſlow of Growth, that it requires ſix or ſeven Months

to

to ripen into a plentiful Crop of Peaſe, when a blue Pea, and others as tender as that, will be in Perfection for Mowing, or Hooking, in four Months; ſo different are the Qualities of theſe two Sorts of Peaſe, though both grow the ſame Year in the ſame Sort of Ground. It is, therefore, that, if a blue or other tender Pea was to be ſown in the Months of *January* or *February*, the Crop would conſequently be loſt by the Severity of the Weather, becauſe the *Hampſhire* Kidpea, or Kidwell, the Maple, the *Eſſex* Roading, the Puffin, the *Spaniſh* Mulatto, the Rouncival, *Dutch* Admiral, the Marrow-fat, the Non-paril, the blue Union, *&c.* are all of them of ſo tender a Nature, that, if they are thoroughly pinched and nipped by a very hard Froſt at Root and Stalk, they can never recover a right Growth again, but will ſhew their Sickneſs and Decay by their red and withering Heads. At beſt, a Pea-crop is ſubject to more fatal Accidents than any other Corn we ſow beſides; inſomuch, that, in the Random, Common, Broad-caſt Way of ſowing Pea-ſeed in Fields, we hardly get a full Crop of them above once in three Years, becauſe the Cold, the Drought, and the Slug are all Enemies to Pea-crops, when they happen to be in too great a Power for their regular Growth; which leads me to write on their particular Damage, for the Knowledge of the Diſeaſe is ſometimes half the Cure.

*Of the Damages that ſometimes happen to Pea-crops by too early Sowing and Exceſs of cold Weather.* —As Froſts and Chills of Waters are very great Enemies to the Growth of Corn-crops, and moſt of all to Pea-crops, it behoves the Farmer to be more than ordinary upon his Guard in preventing their Miſchiefs. Now this is to be done by ſeveral Means: *1ſt*, By Sowing the Seed in an agreeable

greeable Soil, and at a proper Time of the Year. If a Perſon would ſow Hog-peaſe ſo forward as in *January*, he muſt not only ſow a Horn-grey Pea, then, but do it in a warm dry Soil, as, in a chalky, ſandy, gravelly, or very dry Loam, becauſe theſe ſtrain off the Waters from the Pea-roots in a little Time, and thereby deliver them from their ruinous Stagnations; for, if a Farmer was to ſow, at that Time of the Year, the hardy Horn-grey Pea on a clayey or a flat, ſtiff, wet, loamy Soil, he has juſt Reaſon to expect to pay dearly for his Miſtake, and fear the Loſs of his Crop by ſo doing; becauſe here the infant Sprouts of the Pea are infeſted, on all Sides, with the Chills of Air, of Water, and of Earth, that conſequently will overcome even its hardy Nature; for, if the larger and older Plants of Roſemary, Rapes, and many others are overcome and killed, by the Severity of Froſts, and Chills of Wetts, and Winds, that ſometimes happen in *January*, *February*, and *March*, as they did in the Year 1739, how much more will new-ſown and ſprouting Peaſe be liable to be deſtroyed, when they are ſown in an auſtere, ſowre, cold, chilly Earth, and ſuch a Seaſon of Weather ſhould ſuddenly follow and continue for ſome Time. Yet, as abſurd as ſuch a Conduct ſeems, I have known it ventured on by Farmers, who by their long Practice ſhould have acted otherways; and this Miſtake they are the rather led to commit, becauſe they may ſometimes chance to get a good Crop of Peaſe by ſuch an early Sowing in a cold ſtiff Soil, when a mild Spring ſucceeds; and then, in Hopes of the like Succeſs another Time, they run the Riſque of repeating the ſame hazardous Piece of wrong Huſbandry, but generally to their Loſs; which they likewiſe are tempted to do, becauſe of their getting their Land ſown with Beans, Peaſe, and Oats,

before

before Barley-ſeaſon comes on in *March* and *April*, and thus fall ſhort of that full Crop of Peaſe, which, perhaps, they ſee their next Neighbour enjoy, who ſowed the ſame Seed in the ſame Soil, but at a more proper Time.

*Of the Damage that happens to Pea-crops by too late Sowing their Seed.*—As I have juſt finiſhed my Thoughts of expreſſing Part of the Damage that frequently attends the Sowing of Peaſe too early; I now come to make Obſervations on the Damages that ſometimes happen to Pea-Crops, by too late Sowing; the chief Cauſe of which reſults from Droughts and Slugs: If from Droughts, it has the greater Power to hurt Pea-crops, when the Seed is ſown in a Chalk, in a Sand, or in a Gravel, which being all looſe, ſhort, light Earths, they give the Sun and Air a free Acceſs to their Roots; and, when the Peaſe are in their juvenile low Growth, their Stalks not having Length enough to cover and ſhade them, they often ſuffer even to the Loſs of moſt of the Crop, as wanting ſufficient Moiſture to forward their Growth; and, when they have received ſo great a Check as to be thus damaged, in their firſt and early Growth, they ſometimes never fully recover it, but, like a Pig, or other Animal, that is much ſtunted, while it is young, if it lives, it never makes ſo large a Creature, as its Fellows of the ſame Litter, that were better kept. This Sort of Damage, partly accruing by late ſowing Peaſe in dry Soils, is moſt obvious to all Spectators in very dry Summers, eſpecially in Bloſſoming-ſeaſon, when Pea-crops in ſuch Soils and Weather are not able to perfect their Bloſſoms for Want of Moiſture, and then the Crop is, in Part, or fully loſt. A Caſe that often happens in chalky Soils, not above three Miles Diſtance from my Houſe, as I have heretofore obſerved, where ſe-

an Ingredient, which, at the ſame Time it keeps off all Inſects from hurting young Crops in long rainy Seaſons, nouriſhes the Ground, and forces on a moſt expeditious Growth of them, and which I am ready to communicate at a reaſonable Satisfaction. But the dry Weather and the Slug are not the only Inconveniencies that attend a Pea-crop; it may likewiſe ſuffer by wrong Sowing the Seed.

*How the right and wrong Sowing of Peaſe contributes to their good and bad Growth.* — The wrong Sowing of Pea-ſeeds has been often fatal to their Crops, and, yet, this Misfortune frequently happens even to Farmers of long Practice; now the later Peaſe are ſown, the more hazardous is the Crop; and, therefore, it requires the greater Conſideration, how to ſow them in that Way which moſtly contributes to their Safety and Growth. I have before ſhewn, how an old Farmer ſowed his Pea-ſeed by ſtraining them into a Furrow out of a Man's Hand after the Plough, which were covered by the next turned-down Furrow of Earth, and ſo he proceeded throughout a Ten-acre Field: But this proved a wrong Way, as the Soil had but one Plowing in all, after a Wheat-crop, becauſe, it being of the gravelly Sort, the Ground, by Rains that quickly fell after Sowing, bound it down ſo cloſe, as hindered many of the Peaſe from puſhing out their young Spires; ſo that, in ſhort, the Farmer loſt moſt of his Crop by his ill Conduct, occaſioned, chiefly, by his uſing the Pecked-ſhare Two-wheel Plough, that his Ploughman could not help making ſo deep a Furrow, as buried the Seed, when a Foot-plough, or better the new invented Two-board Swing-plough, would have plowed a thin Furrow, which would have covered the Seed ſo ſhallow, as to have given its tender Shoots an eaſy Paſſage into the Air. This

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is one Way to ſecure the Growth of Pea-ſeed in a dry Soil, by Reaſon it has a ſufficient Cover of Earth, to hinder, in a great Degree, the ill Effects of too much Drought. *Secondly*, Or the Pea-ſeed may be ſown Broad-caſt, and plowed in as ſhallow as poſſible, as is often done, where a due Preparation of the Ground has been before; I mean, where a *Chilturn* dryiſh Loam, a gravelly, ſandy, or chalky Loam has had two Plowings in all, one before, and the laſt at the Sowing-time, eſpecially where a Soil is any Thing of a ſtiff Nature, for then the ſafeſt Way is to plow it twice in all; for many have loſt their Pea-crop by being too preſumptuous, and plowing in the Seed on only one Plowing in; then comes, perhaps, a long dry Time, and prevents their Growth; therefore, all prudent *Chilturn* Farmers will give their Ground, if it is any Thing of a ſtiff Nature, two Plowings, not only to make it fine and looſe, for giving the Pea-ſhoots an eaſy Paſſage into the Air, but, likewiſe, for killing or preventing the Growth of thoſe Weeds, which would otherwiſe choak the Pea-crop. *Thirdly*, There is a Way to ſecure the Roots of Peaſe from Droughts, by plowing them into four Furrows, which either a Wheel or Swing-plough can make in the Form of a Ridge; and this we, in *Hertfordſhire*, generally do, where our Land is of a very ſtiff Nature, by Reaſon, when Peaſe grow in this Ridge-form, they lie in a pretty ſecure Manner from the Danger of Waters and Droughts, and more from the Power of the Slug; and, in all theſe three Ways of Plowing that I have mentioned, the Peaſe lie under a Cover of Earth, which helps to nouriſh them all the Time of their Growth, far beyond the common Method of only harrowing Pea-ſeed; a Way that is better done in *January*, *February*, or *March*, than in *April*; for,

for, if Peaſe were to be only harrowed in in this Month, and a very long Seaſon followed, it would greatly endanger the Crop, as being more expoſed to be deſtroyed by Droughts than in any other Form of Sowing whatſoever, for Want of a ſufficient Cover of Earth; and not only by Droughts, but alſo by Field-fowls, who, by the ſhallow lying of the Pea-ſeed, have a wide Opportunity to find out their beloved Food here, and devour great Quantities of it; which they will not fail to do, if Peaſe are ſown in this Month after a wrong Way. Now then avoid that old pernicious Way of only harrowing in Peaſe that are ſown Broad-caſt at this Time of the Year, and ſow them in a better Form.

*Why large Peaſe and Horſe-beans cannot be regularly ſowed out of a Drill-plough, unleſs they are firſt prepared by an even Sorting of them.*—This may ſeem an odd Article, at firſt, to ſome, but I ſhall give ſome Hints, that will prove it neceſſary, that both Peaſe and Horſe-beans ought to be firſt prepared, before they are ſown out of a Drill-plough; and that, becauſe the Seed-box as it is made to a Truth, for dropping out ſized Peaſe or Beans, the Seed cannot be dropped out of it in a regular Manner, that is, not pretty near of one Size, and eſpecially the larger Sort of Peaſe and Horſe-beans; for, when large Peaſe or Beans come into the Seed-box, bigger than others, it cauſes a Miſſing; that is, there will be many Vacancies in the Drill, by Means of ſuch Miſſing, that may be of very ill Conſequence to a Farmer, where many Acres are ſown in this Manner. Now the Peaſe, moſt liable to this Misfortune, are the Rouncival Sorts; as, the great Rouncival Maple, which by ſome is called the *Grey Pea*, and is the largeſt Pea ſown in *England*; the great blue Union-pea, the Non-paril, and others. Theſe, as they grow

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in the Field, are of ſeveral Sizes; and ſo they are, when cut and carried into the Barn, thraſhed, and cleaned in the common Way of cleaning Peaſe; and then, in Courſe, they will be ſold in ſuch an unſizeable Condition in the Market and at the Seed-ſhop. The Horſe-beans are always ſold in the very ſame uneven promiſcuous Condition, ſo that there is no ſuch Thing as buying any of theſe large Peaſe or Beans in an exact Size for ſowing them regularly out of a Drill-plough, and then the Conſequence will be what the following Account will make appear.

*How a Gentleman's Bailiff attempted to ſow Horſe-beans of an uneven Size, out of a Drill-plough, and what was the Conſequence thereof.* — This happened I think in the Year 1742, in a certain Part lying about thirty-five Miles to the *Southward* of *London*, where a Gentleman's Bailiff attempted to ſow Horſe-bean-ſeed out of a Drill-plough; but he could not drop them out of it in a regular Manner, becauſe they were not all of a Size, which occaſioned the ſmall Sort to drop out ſooner than the larger Sort, and in a more irregular Order; for ſome of the ſmalleſt Seeds fell too thick into the Drill; and in other Places it was too thin; by which Means there were many vacant Parts of the Drills unſown. Now this Miſcarriage of ſowing the Seed regularly, is contrary to the Intent and Purpoſe of ſowing Seed out of the Drill-plough; for, by ſowing it with this excellent Inſtrument, all Seed ſown by it ſhould lie regularly at near exact Diſtances, and in an even Depth; and this becauſe if one Seed ſhould lie on, or too cloſe by another, as they both muſt get their Living from the ſame Fund of Earth, one will rob the other, and both bear (if they grow at all) weak Stalks and under-ſized Corn. But what is ſtill worſe, where the Seed miſſes Falling, there will be no Corn at all, only Weeds will come up, and

and then in Courſe a Damage will happen to the Farmer inſtead of a Profit; both which Sorts of Loſſes, I am going now to ſhew how to prevent.

*How to prevent the Damage of ſowing irregular unſizeable Pea and Bean ſeed out of a Drill-plough.* — Neither by any ſpliced wooden Sieve, nor by throwing with a Caſting-ſhovel Peaſe and Beans in the longeſt Porch of a Barn, can any Taſker ſeparate the ſmall Pea, or Horſe-beans, from the larger, in ſuch a Manner, that they ſhall be all very near of one Size; and, unleſs they are, they can never, as I ſaid, be drilled in a true regular Sowing of them. This is well known to thoſe Farmers, who thraſh and ſow this Sort of large Seed in Drills. Not but I own, that by a long Throw, and by repeating ſuch a Throw, Peaſe and Beans may be made to anſwer pretty near of one Size, becauſe the ſmall ones will fall ſhort of that Length that the large ones will arrive at by ſuch a Throw. Yet ſtill there is no ſuch Thing to get the Seed of large Peaſe or Beans, by this Means, into ſuch an even Size, as an Inſtrument can that is made for this very Purpoſe; wherefore there was a Neceſſity for finding out a Way to bring this great Conveniency to paſs; otherwiſe, all Farmers and Gentlemen muſt be at a great Loſs to ſow regular Seed, and enjoy a regular Crop; as the Gentleman's Bailiff's Caſe was I have juſt been writing of, who, where he found, that the Beans miſſed Falling into the Drill in due Time, followed the Drill-plough and ſowed them out of his Hand, and thus ſupplied the Deficiency; for ſuch Deficiency muſt needs happen, becauſe by the Horſe drawing the Drill-plough in a conſtant Rotation of Pace, if ſmall Seeds drop out ſooner and thicker than large Seeds can, there muſt be different Vacancies and unſown Ground in the Drill, more than would be if the Seed was all or very near all of a Bigneſs, which muſt be ſupplied by an after-

after Hand-ſowing, if the Owner intends to reap or mow a full Crop of Grain at Harveſt; but how troubleſome, how irregular, and how uncertain ſuch a Hand-ſowing muſt be, the Sower will find, and the Crop will prove. Now, to prevent this great Damage that will happen by Sowing uneven Seed; The Gentleman, I have before mentioned, the World is very much obliged to, for inventing a very light and cheap Inſtrument that will effectually anſwer this great and profitable End of ſeparating the ſmall Peaſe and Horſe-beans from the great ones, for ſowing only the great ones. I have therefore this to advertiſe and inform all Gentlemen and Farmers, that I ſell and teach the Uſe of theſe light and cheap Inſtruments, for culling and ſeparating the ſmall Sort of Wheat, Barley, Oats, Peaſe, and Beans from the biggeſt Sort. One Inſtrument ſerves for both Wheat and Barley, another for Oats, another for Peaſe, and another for Horſe-beans. Thus all Gentlemen, who keep Ground in their Hands, and ſow it with Corn for Sale, and all Corn-Farmers, ſhould be furniſhed with theſe four Inſtruments, if they will be compleatly ſet up for outdoing all their neighbouring Farmers, in obtaining far better Crops of theſe Grains than they can, who ſow ſmall and great Seeds together promiſcuouſly. And, although theſe ſmall Inſtruments are made ſo light, that their Charge is but a meer Trifle; yet they have ſuch a Conveniency, that four of them will perform the Separating of five Sorts of Seed, the leſs from the greater Sort; whereas the great Seven-feet long, Thirty Pound round Wire-ſcreen, can only ſeparate two Sorts, and they are Wheat and Barley. I have alſo another ſmall Tool that prepares the famous Tick-beans, by ſeparating the ſmalleſt from the largeſt Seed, to a very great Advantage, for Setting in theſe croſs, high, wet, Vale Ridge-lands.

*The great Benefit of Sowing the largeſt Seeds of all Kinds.*—I think, I may ſay, I am the firſt Author that ever detected that abſurd wrong Notion of ſowing leaſed Wheat for the beſt Seed; a Notion that has reigned, Time out of Mind, among capital Farmers, and ſo it does, to this Day, with Thouſands; and I confeſs myſelf to have been one of their Number formerly, till I found myſelf in a palpable Error, by ſowing ſuch leaſed Wheat; which I was led into with the Multitude, on Account of its being free from the Stain of the Seeds of Weeds, that moſt other Wheat is infected with, little or more, notwithſtanding the Uſe of the Wind or Knee-fan, the Throw, the large upright Iron-wired Screen, and the Braſs-wired Rying-ſieve, which cannot deliver Wheat nor Barley from all the ſmaller Seeds of that pernicious Weed, called *Darnel*, &c. But the Remedy proved worſe than the Diſeaſe; for though we, by the Means of ſowing ſuch leaſed Wheat, get cleaner Crops than ordinary, yet we pay dear for it, by its returning ſuch a Number of weak Stalks, and lean Ears and Kernels, that the Wheat becomes ſo feeble, as not to be able to withſtand the Fury of boiſterous Winds, and the Preſſure and Weight of Rains; becauſe the ſmall underline Kernels, with which ſuch leaſed Wheat-ſeed chiefly abounds, occaſion a Feebleneſs in the Stalks, and a Return of ſmall Kernels, that are to be ſown again and again; for, you muſt know, that, when Farmers buy leaſed Wheat to ſow, it is always bought with an Intent to breed a clean Sort, that will ſell for the better Price at Market; but inſtead thereof we often get a Sort that ſells for a worſe Price; for the ſmall Kernels not only breed a feeble-ſtalked Wheat, but ſometimes Smut and Pepper-wheat, for Want of Strength at Root to produce a ſtronger Stalk and larger Kernel. From all which I infer, with juſt Reaſon, that, if the ſmalleſt

ſmalleſt Peaſe and Beans are ſown among the largeſt Sorts, ſuch ſmall Seed will produce ſmall Stalks, and they ſmall Pods and Grains, and few in Number. And, when this happens to be the Caſe, where is the Farmer's Rent to be made, when Peaſe and Horſe-beans ſell for leſs than two Shillings a Buſhel, as they did in 1743? Now by the Help of theſe cheap light Tools, or Inſtruments, a Farmer may get the largeſt of Peaſe, Beans, or other Seed, and, by ſowing them in Drills, they will be larger ſtill; for the Drilling-Husbandry carries this Perfection along with it, that it increaſes the Bulk of Grain ſown before in the random or promiſcuous Way; and, when this happens to be the Caſe, what will be the Iſſue? Why, ſuch a Farmer will not only ſell his Peaſe, Beans, or other Grain at Market, when his Neighbours cannot, but he will alſo ſell them at a far greater Price; and eſpecially when they are bought up for Seed, which theſe Inſtruments moſt excellently well prepare in ſuch a Manner, that no Wheat, Barley, Oats, Peaſe, or Beanſeed can (I believe I may venture to ſay) come up to it, by a conſiderable Degree of Goodneſs, that is prepared in the old common Way of doing it with the Fan, upright Screen, Throw, or Splintered, or Rying-ſieves. Here then I offer a Jewel to the World, and am the firſt Author that ever offered it; nor had I been able to do it, had it not been for the extraordinary Ingenuity and Generoſity of a moſt worthy Gentleman, a Stranger to me, to whom I ſent a Servant-ploughman, out of our Country, and who had an Author's Intereſt at Heart, whom he found endeavouring to do his Country all the Service in his Power; and I have this alſo to add, that, as I think I have made the great Utility of theſe cheap, light, little Inſtruments fully appear, by writing the vaſt Conſequence they are of, to the Intereſt of all Far-

mers and Gentlemen who occupy plowed Grounds; I here give Notice to all Perſons who are pleaſed to favour me with an Order to ſend them either or both Sorts of the Drill-ploughs, Horſe-break, and *Dutch* Hough, that it will be perfectly neceſſary that I ſend with them the Inſtrument for ſeparating the ſmalleſt from the largeſt Seed.

*Of the great Pleaſure that drilled Corn yields to its Owner and Spectators.*—— It is not only the moſt profitable Husbandry of all others, to ſow Corn in Drills, but it is likewiſe the moſt delightful and moſt healthful. It is the moſt delightful, becauſe the many Rows of Wheat, Barley, Oats, Peaſe, Beans, and artificial Graſſes, *&c.* that are ſown and grow in incloſed Fields, at ſtated Diſtances, give the Owner and all Spectators a ſpacious Proſpect of viewing their ſeveral various Gradations of Growth, from the firſt Sight of their infant Blades, or Sprouts, to the full ripe Ears and Pods. The firſt Delight is, in the Wheat-crop, when its young and branching Condition ſhews the numerous Stalks and Ears that each Root is like to produce; for then it makes the Owner, and it ſhould do all others Hearts glad, in Hopes its Youth will be crowned with a plentiful old Age; this they can plainly diſcern, and the better for the Corn growing thus in Rows by the Sides of large Intervals of cleaned bare Earth. The ſecond Delight is when the Grain is obſerved to get the Aſcendant of the quick-growing ſtruggling Weeds, which, by growing in Drills, it is moſt eaſily helped to do, with the valuable *Dutch* Hand-hough, and the moſt excellent Inſtrument that ever was invented for this Purpoſe, the Horſe-break, which in a very expeditious and cheap Manner may be made to eradicate the moſt ſtubborn Weeds that are; when his Neighbours Corn is eat up and choaked in a great Meaſure by them, that was ſown in the Random-way,

becauſe,

becauſe, in this Poſition of Growth, it is impoſſible for the Art of Man to overcome and deliver the Corn from the infinite Damage that many of their Tribe cauſe in ſome Sorts of Seaſons and Land; and then the Farmer ſtands with an aking Heart to ſee that Evil which he cannot remedy, and which is like to endanger his Crop being ſeized for Rent, that his weedy thin-growing Grain may be the ſole Cauſe of; as, indeed, it often happens to be the very Caſe of many ignorant, negligent, and poor Farmers, who might eaſily have prevented their Ruin, had they made Uſe of the Drill-plough, the *Dutch* Hand-hough, the Horſe-break, and the Separating-tool; from whence I take the Liberty to make this juſt Obſervation, That many Landlords are to blame, on this Account as well as their Tenants: The Firſt for not endeavouring to oblige, or perſuade them, to the Uſe of theſe profitable Inſtruments; and the laſt for not accepting their Advice; the one that he may have his Rent duly paid, and the other, that he may be certainly enabled to do it with Eaſe and Pleaſure. The third Delight, which drilled Corn affords, is to ſee it in its blooming, earing, and podding Poſtures; how the white, tender, trembling Bloom of the Wheat comes out from the many Joints of the green Ear, and this Day by Day for many Days together, while the glorious Sun and charming fine dry Weather are aſſiſting in its Breed; and in its Dying away, in the Formation of the milky Kernels, that afterwards ripen into hard golden Grain. But of this more hereafter.

CHAP.

## CHAP. VIII.

### *The Copy of a Letter from an ingenious Gentleman to this Author.*

*THE genuine Copy of a Letter to the Author, ſhewing the ingenious Improvements a Gentleman made in his Eſtate, by the Directions of his Books.*——

*SIR,* *October* 29, 1743.

I Am the Owner of a ſmall Eſtate at ————, three Miles from the Market-Town of ————, in the County of ————, of about 60 *l. per Annum*, Part in my own Hands, and Part of it let, in all about eighty Acres of Land of our large ———— Meaſure, which is eight Yards to the Pole or Perch, lying upon the Banks of the River ————, which parts this County from that of ————, and is a fine, dry, deep Haſle-mould (I think you call it *Loam*) and very level, about Two-third Parts Arable, and One-third Wood-land. Now, being fooliſhly fond of this Spot, I ſome Years ago threw down moſt of the old Fences, which were very irregular, cumberſome, and inconvenient (taking up much more of this good Land than I was willing to loſe) and have caſt the ſame into regular ſquare Cloſes, of about three or four Acres a Piece, by raiſing Cops, and planting the ſame with Quick, which now comes on to Admiration, inſomuch that one or two of the firſt ſet I ventured the laſt Winter to cut and lay down in the Manner you preſcribe in your *Modern Husbandman* for *January*, Chap. XII. Pag. 89, deſigning to go on with more; theſe Fences are clear of all Oaks as well as noxious Weeds, only

only I have planted at about eight Yards Diſtance ſome Apple-trees.

I have the Misfortune to be but too nice about this little Spot of pretty Land, and, being one of your conſtant Readers, I think, I may ſay ever ſince you appeared in Print, at leaſt ſince you obliged the World with your *Hertfordſhire Husbandman*, and *Timber-Tree improved*, by the Help of them, and all your other Monthly Books that come out, I have made ſuch Improvement of this little Eſtate, by Sowing ſome artificial Graſſes (Things which were never ſeen before in this Part of the World) Turneps, and ſeveral Years Crops of good Wheat (much better than many of my Neighbours) that I find it redounds to my very great Profit and Advantage; which my Neighbours obſerving, they now tell me my Land begins to look like a Garden, and are endeavouring to come into my Way; which, if there is any Thing of Truth in their Obſervations, I am ſure, it is altogether owing to your Goodneſs in obliging the World (and myſelf in particular) with your very uſeful and inſtructive Labours. But now, Sir, to come to the Point, I have long, with Pleaſure, taken Notice of the Drill-Husbandry, recommended and deſcribed both by you and Mr. *Tull*, in that very ingenious Book of his, wherein he hath ſo largely and ſo very accurately laid down Rules for that Sort of Husbandry, and making the Inſtruments to be uſed therein: But I cannot but be of Opinion (with Submiſſion to better Judges) that Mr. *Tull*'s Ploughs and other Inſtruments, though very well deſcribed in his Plates, and adapted to the ſeveral Ends they are deſigned for, yet, in both Conſtruction and Practice, I fear, they will be found too incricately nice and perplexed in their Performance. I ſpeak not this in Derogation to Mr. *Tull*, or his ingenious Contrivance; no, I ſhall always revere both him and

and his Works, notwithſtanding the Efforts of his moſt malicious Enemies, who (to their Infamy be it ſpoken) neither have, nor, I believe, can confute him.

But apprehending both from him, and you, that the Drill Huſbandry grows more and more into Requeſt every Day, and in a little Time is likely to become the univerſal Practice of our Kingdom, I make thus bold (though a Stranger) to apply myſelf to you, who I find make no Diſtinction of Perſons, but are willing to anſwer all Letters and Queries from as well Men of lower Rank, as thoſe of higher Stations; I therefore, in the Number of the firſt of theſe, beg you would pleaſe to let me know the ſeveral Prices of the Three-wheel Drill-plough, the Pulley-plough, and your Horſe-break, being very deſirous to make Trial of their Uſe; and whether, if I ſend for them, you would be ſo kind as to procure, and ſend me along with them, an honeſt, good-natured, intelligent Servant, that well underſtands, not only the Uſe of the Inſtrument, but the different Management of the Land he is to uſe the ſame upon; ſuch a one I mean (or the ſame if you can) as you recommend in the Concluſion of your Monthly Book for *January*; and the Wages he would expect by the Year, which I ſhould in a great Meaſure refer to yourſelf to ſettle, according to his Merit. I can (without Oſtentation) ſay he will meet with a kind Maſter and Miſtreſs, and a well regulated Family. But I will conclude this too long Epiſtle, having incroached too much upon both your Time and Patience, and am,

*Sir, your very humble Servant unknown,*

*J. L.*

N. B. *I ſhall want ſeveral Things beſides the Ploughs, as ſeveral of your black Kerroon Cherries, Parſnip-Apples, Orange-Pears,* &c. *Pray what are they a-piece?*

The

The Anſwer of this Letter being too long to inſert here, I have omitted Writing it; and, ſince I ſent it, I have received another Letter from the ſame ingenious Gentleman near as long as this firſt, which I ſhall write a Copy of a few Leaves farther, with my Anſwer to the ſame; for where any Letter gives an Account of any Improvements, and partly how they are made, they may be as edifying to a Reader as a Chapter on another Subject in Huſbandry.

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## CHAP. IX.

### *Of the Improvement of* Thetches.

*OF Sowing Thetch-ſeed in this Month.* — By Sowing of Thetch-ſeed in this Month, the Danger of Froſts is partly over, which ſometimes, by their extreme Severity, prove fatal to the moſt hardy Grain, among which, I take the Thetch to be one of the Chiefeſt; yet even this will *go* and *come* ſometimes, as we call it in *Hertfordſhire*, when it is ſown very early; that is, the Froſt will ſo check their Growth, as to near kill them, unleſs milder Weather happens in their Favour, and then they may recover. Thus we ſay, *a Thetch will go and come*; but ſometimes they are killed out-right, by very long and hard Froſts, inſomuch that ſome Farmers have been diſcouraged from ſowing them between *Michaelmas* and *Chriſtmas*, for Fear of their being thus deſtroyed; which Riſque may be intirely avoided by ſowing them in this Month, for Mowing them in Harveſt as a Crop of Corn; for it is not too late to perform this Work, provided the Soil be either a dry Loam, or a gravelly, or a chalky, or a ſandy Loam. In this Caſe a Farmer

may ſow Thetch-ſeed in *April*, not only for Mowing, as a Crop of Corn, but likewiſe to mow green for feeding Horſes and Cows in Racks, or for feeding on them in the Field, as we generally do: And likewiſe with our fattening and folding Sheep, as I have in laſt Month given a particular Account of. But, to bring all this to paſs in Perfection, the Soil ſhould be firſt well dunged, or otherwiſe dreſſed, in order to bring forward ſuch a late ſown Crop in due Time; for, if Thetch-ſeed ſhould be ſown on a poor Soil for theſe Purpoſes, the Conſequence very probable would be, that they will be too late ripe; and then as the Days are ſhort, and the Nights long, and the Stalks of Thetches commonly grow thick, and matted together; if a very fine dry Time does not happen for their Drying, they will be very likely ſpoiled for a Crop of Corn, as I have known done more than once. Again, when the Soil is firſt brought into good Heart, by Dung, or Top Manures, there may be expected a forward and full Crop; and the ſurer ſo, if warm Showers quickly ſucceed their Sowing; for, when their infant Progreſs of Growth is thus attended with a wet Seaſon, a timely and ſufficient Covering of their Stalks will ſo ſhade their Roots, as to protect them againſt the Damage of long and violent Heats.

*Of the Sort of Thetch-ſeed that may be ſown in* April.— Some ſow the ſmall *Lenten* Thetch, others the large Gore Thetch; the Largeſt fetch the moſt Money at Market, as being the propereſt Sort to feed Pigeons and other Animals, and are likewiſe beſt to ſow at this Time of the Year, for Mowing them in their green growing Condition, to give them in Racks to Horſes and Cows, or for feeding them and Sheep on them in the Field, becauſe their juicy Stalks yield the greater Bulk and Cover; but then the large Gore Thetch requires a richer Soil to grow in, than the ſmaller *Lenten* Thetch, and therefore

fore it is more than ordinary neceſſary to dung or otherwiſe dreſs ſuch Ground, on Purpoſe for nouriſhing a Crop of theſe large Thetches; but, for the ſmaller Thetch, ſome of the better Huſbandmen dreſs their Ground, and others not.

*The Profit of Sowing Thetch-ſeed.* — In the old and common Way of Farming, the Thetch does both *Chilturn* and Vale-Farmers a great deal of Service; but the *Chilturn* Farmer reaps the greateſt Profit of all by it; becauſe, as he is Maſter of ſeveral incloſed Fields, he can ſow ſome of them with Thetches, that otherwiſe muſt lie fallow the following Summer; and theſe in ſuch Order, that, by ſowing them at different Times, he can command both early and latter Crops of them. But what is likewiſe very profitable to him, he can employ his fallow Ground in the Growth of a Thetch-crop, and dreſs it with the ſame for a Turnep, or a Rape, or a Wheat-crop that is next to ſucceed. Here comes in a great Advantage indeed, even that which will ſupply the Charge of twenty Shillings each Acre of Ground, that otherwiſe muſt be beſtowed upon it to bring the ſame into Heart, to nouriſh ſuch a Turnep, or a Rape, or a Wheat-crop: Whereas if Thetches are fed off, or plowed in, they will ſufficiently do it alone. Now how ſuch a Feeding or Plowing is to be performed, to anſwer this, is the Queſtion? Why, Horſes will do this indifferently well, if grazed on them in the Field; Cows, worſe, and Sheep beſt; for Sheep, when fed and folded on them, leave the beſt of Dreſſing behind them. But to further explain this, I am to obſerve, that, when Thetches are big enough to feed Store-ſheep with in the Field, the Farmer begins to ſet up his Fold in the ſame, on Purpoſe to fold his Sheep that feed on theſe Thetches. This he fails not to do every fair Night after the Sheep have been fed on the Common, or other Field, about half the ſame

Day, and the reſt of it fed and baited in this Thetch-Field, till they get their Bellies full, for enabling them to dung and ſtale in a plentiful Manner: And, that theſe Sheep do no more Harm in the Field of Thetches than what cannot be helped, the Farmer acts the good Huſband, and runs a Row of Hurdles a-croſs it, to confine them to their due Bounds; that, when one Part of the Thetches are fed enough down, he moves them farther to give them a freſh Bite, and ſo from Time to Time till the whole Field is fed and folded over. Thus a Farmer enjoys a plentiful Dreſſing in the cheapeſt Manner poſſible, even to a double Profit, one by the Seed, and the other by the Dungs and Urine of theſe excellent Creatures Sheep; Creatures whoſe Excrements agree with almoſt all Sorts of Land, that thus may be improved to a very high Perfection both early and late: That is, this profitable Piece of good Huſbandry may be carried on from the Month of *May*, to near *Michaelmas*, by feeding down alternate Sowings of this Thetch-ſeed; which gives a Farmer early and late Opportunities of enjoying the Profit of their ſeveral gradual green Crops for his different Sorts of Cattle. If he is to feed his Horſes with them in the Stable, how valuable is a Field of them that is ſituated near Home? For then the Servant can mow them every Day, or every other Day, and bring them Home freſh for feeding his Team of Horſes with them, that will thus enable them, with a little Corn, to do a great deal of hard Work, and, at the ſame Time, keep them in pure Health; for the green Thetch, thus given, will keep their Bodies open, preſerve their Wind, hinder the Swelling of their Legs, and the Cracking of their Heels; prevent Farcies, Mange, and Surfeits; and, in ſhort, nouriſh theſe ſerviceable Creatures to that Degree, that with good Management they may be kept in good Fleſh, and in good Heart, while they

they labour early and late. So may Cows be fed with this excellent green Food in the ſame Manner Horſes are, even till the Thetch gets into its Kidding, or Podding Growth, and be given to them in the Cow-houſe, where they may feed on this luſcious green Meat, during the hot Summer Seaſon, and at the ſame Time be delivered from the Teaſings of the troubleſome, painful, biting Fly, and the ſcorching Heat of the Sun, which, when theſe Creatures feel in Exceſs, while they are confined in an open Field, it fatigues them to that Degree, as to leſſen their Quantities of Milk, that, in a conſiderable Number of Cows, muſt amount to a great Loſs; and altho' it may be objected, that this is a troubleſome and chargeable Way, thus to mow green Thetches, and give them to Horſes and Cows under Cover: It may be well anſwered, that, by a Farmer's ſo doing, he reaps ſeveral Advantages, which he would not enjoy, if the Horſes and Cows were fed in the open Field. For, *firſt*, by their being kept up in the Stable and Cow-houſe, they are prevented trampling down and ſpoiling almoſt as much green Meat as they eat, which both theſe Quadrupede Sorts generally do, by their Running about, endeavouring to free themſelves of their Fly Enemies. *Secondly*, the Farmer, by this Means, enjoys much more Profit by their Milk; for the ſucculent large Stalks of green Thetches are ſo juicy, when freſh cut, that they produce Abundance of Milk, while Cows feed on them in a Cow-houſe. *Thirdly*, they are hereby delivered from the Torment of aking Feet, which is a Misfortune inſeparable from thoſe Cows who are daily drove on hard Ground to diſtant Fields; for, by ſuch a Drift, the Cattle's Feet are made ſore, even to a Lameneſs, by reaſon they ſometimes are cut by the Sharpneſs of Stones, or if not cut, the Gravel that they take in and lodge, will not fail to give them ſome Pain; and

then

then the Conſequence is, that ſuch a Cow falls off her Milk, and, withall, perhaps, to a great Degree of Loſs; a Loſs that I have too much experienced myſelf, while I was neceſſitated to drive my Cows to ſome Diſtance, before they could arrive at the Field of Graſs or Thetches; for Cows may be fed on the green Thetch, while it is growing in the Field, as well as Horſes; but, for theſe Reaſons, it is much better to feed them under Cover, if the near Situation of a Field will admit of it; and, if it does not, I am ſure that a ſmall Drift, whether it be on hard or ſoft Ground, will do them ſome Harm. *Fourthly*, Cows are, by this Means of Feeding them on mown green Thetches in a Cow-houſe, free of the Danger of Hoving, which is a Danger that all Cows are liable to, that feed on them in the Field; a Danger that expoſes a Farmer to the Loſs of all his Cows in one Hour's Time or leſs, if they feed on green Thetches in a wet Day, and in a high Growth of them, with a very hungry Appetite; becauſe their ſappy Stalks are then loaded with Liquor and Wind, which, if taken into their Bodies in too great a Quantity, may probably hove and burſt them. *Laſtly*, when either Horſes or Cows are fed daily with mown green Thetches under Cover, they will make Abundance of Dung, which though it is a ſoft Sort, and not ſo good as that produced by the Feed of Hay and Corn, yet it may be made to do the Farmer great Service, if he ſaves it in a right Manner, and applies it as well; that is, if he preſerves it from the Waſh of Rains, mixes it with harder Dungs, and lays it on gravelly, ſandy, chalky, or other dry, hot Soils, where ſuch cool, greaſy Dung will do moſt Service. And how precious a Commodity all Dungs are to a *Chilturn* Farmer eſpecially, who rents ſeveral Fields of hungry Soils at a great Diſtance from Towns, which incapacitates him to receive any Benefit from buying Dung,

Dung, ſo far off, when he thus enjoys it at Home in the cheapeſt Manner poſſible; which leads me to obſerve further, that there is no Piece of Husbandry in all the *Virgilian* or old Way of Farming, that exceeds this of Sowing Thetches, and feeding their green Crops off with Cattle kept in the Field, or Houſe; for, in either Way of feeding them, they do the Ground great Service, becauſe theſe, like Pea-crops, prevent the Breed of Weeds, and kill others that are old Poſſeſſors of the Field, by their great and cloſe Cover. They likewiſe, at the ſame Time, hollow the Ground to that Degree, that one Plowing of it afterwards for ſowing the ſame with Turneps or Rapes, or Wheat, will do where two would not, if a Crop of Thetches had not preceded their Sowing; and when a Crop of green Thetches are eaten or mown off the Land by *May*, or the Beginning of *June*, ſuch Land may, by only one or two Plowings at moſt, be brought into a fine Tilth, fine enough for receiving Turnep-ſeed of the forward Sort, or a late Sort; if the forward Sort are ſown, as the Seed of the *Dutch* Turnep, they may be drawn or fed off time enough to ſow the ſame Field with Rape-ſeed; and, after theſe are done, a Wheat-crop, or a Barley-crop, may be ſet on the ſame; and all this performed without the Help of carrying any Dung or Manure to the Field, provided ſuch Thetches, Turneps, and Rapes are fed off with Sheep; for by this Means the Ground will be full rich enough to carry forward any of theſe After-crops to great Perfection, becauſe the Weeds will be crippled, and the Land plentifully ſtored, and furniſhed with the nitrous Qualities of the Sheeps Dung and Urine. But the Profit of Feeding green Thetches is more than ordinary known to the Farmer that ſuckles Houſe-Lambs. Theſe enjoy their Benefit by their Ewes that feed on them in the Field, and, by this juicy Food,

Food, are capacitated for a long Time to give Abundance of Milk, that nouriſhes more than their own Lambs; for green Thetches will perform all this, when natural Graſs cannot, becauſe, when this is dried or burnt up by the violent Heats of the Sun, the green Thetch grows faſt, as being ſecured in its Roots by the Shade of its Stalks from this Misfortune; and, indeed, in this and ſome other Reſpects is of greater Value to a Farmer, than either Clover, Trefoil, or *St. Foyne* Graſſes; for, if theſe artificial Graſſes are fed down too cloſe by the Sheep, their Stalks will bleed, or ſpend their Sap ſo freely, as to cauſe their After-ſhoots to grow up weak and late, if not quite kill them; a Misfortune that the Farmer is not in danger of from his feeding a Crop of green Thetches; becauſe, when theſe are fed bare, he plows up the ſame Ground, and then there is an End of the Thetch-crop. This long Diſcourſe on the Profit of Sowing Thetches I write from the Field of Practice, becauſe I every Year ſow this Seed myſelf; and, what I have wrote of the ſame, is well known to be the Words of Truth, by thoſe Farmers who do the like. I ſhould now come to ſhew the Manner of ſowing theſe Thetches in Ridges and Broad-lands; but as I have, I think, done this ſufficiently in a former Month, it may be omitted in this.

*Of Sowing Thetch-ſeed in Drills.* — This may be very well done by the Drill-plough, by Means of having a Seed-box cut in Proportion to the Size of the Seed; but then the Perſon, who buys the Three-wheel Drill-plough directly of the Maker, may happen to be diſappointed in the right Management of this Piece of Huſbandry, for if the Seed is of an unſizeable Bigneſs, as moſt or all is of any Sort that is bought in a Market, the biggeſt Seed eſpecially; ſuch as Horſe-beans, Peaſe, and Thetches, cannot be regularly dropped out of the Drill-plough, unleſs

leſs the Seed is all of an even Size, as I ſaid; and, if it is not, the Conſequence will be an irregular Growth of the Crop to the Damage of the Owner; for it does not concern the Plough-maker to do any more than to make the ſeveral Pieces and Seed-boxes of this Plough of a regular Size; the Feat lies in the Preparation of the Seed, and, therefore as I have obſerved, no Throw, Fan, nor Screen, nor Sieve, in common Uſe with Farmers, can do this Thing like the ſmall Machine I am Maſter of, which I ſell at half a Guinea Price. Now if Thetches are to be fed in the Field with Cattle, or to be mowed green, and given them in Racks at Home; or if the Thetches are to remain in the Field to ripen for a Crop of Corn, ſtill the beſt Way of Sowing them is to do it with the Drill-plough in the Manner that I give an Account of in the Directions that I ſend with the Plough to the Perſon who employs me to buy it and ſend it him; which generally takes me up a Sheet of Paper, or more, to write on that and other Matters relating to this Three-wheel Drill-plough, *Dutch* Hand-hough, and Horſe-break, and which is ſo perfectly neceſſary to be done, that it is not reaſonable to ſuppoſe that they can be managed unleſs proper Directions are ſent with them.

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## CHAP. X.

*The Copy of a ſecond Letter from the ſame ingenious Gentleman Mr.* J. L. *to this Author.*

December *the* 2*d*, 1743.

*SIR*,

I Had the Favour of your moſt obliging Letter of the 9th of laſt Month, and am fully ſatisfied of the Fairneſs of your Terms about the

Ploughs, and am long ſince convinced of the great Uſefulneſs of their Performance; but am ſorry to hear there is not a ſkilful Servant to come along with them; for tho' I believe and hope the Inſtructions, you are ſo good to promiſe you will ſend along with them, may be full and ſufficient for the Purpoſe of uſing them, yet I am afraid it will be a hard Matter to bring over theſe obſtinate Humdrums from the old beaten Road of their Grandfathers.

Had I myſelf been ever uſed to Plough-holding, or been of Youth and Vigour ſufficient for ſuch an Undertaking, the great Regard, I have always had to every Branch of good Huſbandry, would have made it a Delight and Pleaſure; but being near entering upon my great Climateric, and, with the ingenious Mr. *Tull*, having for many Years been tormented with the Stone, Gravel, and other Infirmities (the natural Attendants on old Age) have rendered that pleaſant Part of Life almoſt impracticable, any farther than viewing and directing my Men, when they pleaſe to be directed in their Huſbandry. This pleaſant Path, together with Building, which I have likewiſe had a Share in (and I can ſay, without Oſtentation, not without ſomething of Oeconomy too) theſe two Things, I ſay, have moſtly taken up my Time for twenty or thirty Years paſt; ſo that at this Age, and under theſe Circumſtances, you will allow me to ſtand in Need of a good Aſſiſtant. I would therefore ſtill beg the Favour of you to recommend and ſend me a good Ploughman, if poſſibly you can; I mean ſuch a one as not only knows the Uſe and Handling of your Inſtruments, but alſo to convert and turn his Land to its various and proper Uſes and Purpoſes, of which I muſt own myſelf no great Adept. My Land is generally a good dry Haſle Surface, and pretty deep, only ſome few little Riſings that tend

a little

a little more to Gravel, but not without a Mixture of good Soil too; I have moſtly got it into broad level Lands, which I think you recommend as more proper for Drilling than the Ridge-lands are. As to the Servant's Wages, I ſhould leave it intirely to you to agree with him. The Ploughs might be ſent by Water to ——— where I could order them to be taken in and ſent up a new Navigation to——— eight Miles Diſtance from my Houſe, whereas ——— is Thirty-one. If the Trees could not conveniently come along with them, I could order them to be taken in by the Carrier as he comes through *Dunſtable* in the Spring Seaſon, as you direct. As I always have and ſhall be a conſtant Cuſtomer and Admirer of your very uſeful Books, ſo I the rather hope for your Indulgence, and that you will excuſe this Trouble given you by, *Sir*,

*Your moſt obedient humble Servant*,

J. L.

*P. S.* I hope you will favour me with a Line at your Convenience, about the Servant; and then I will give you proper Orders about the Ploughs, *&c.* and order the Money to be paid you by a Friend in *London*.

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*The Copies of this Author's Anſwer to the forementioned Letters.*

*S I R*,

IT is with great Pleaſure that I hear my Labours are attended with ſuch Succeſs, as to do my Country Service: For to this End and Purpoſe I have been at extraordinary Charge and Pains in travelling ſeveral Years to acquire a Knowledge, that I could not

poſſibly attain in the Country I live in. And altho' I never met yet with a ſuitable Encouragement for my Expences and Labours to ſerve my Country, by Reaſon it is not in my Power to make the moſt of my Writings; yet, as I take Delight in doing the World what Good I can, I the more eaſily diſpenſe with the Diſappointment. A Letter from a Gentleman acquaints me, that by the Deſcription I have given in my Monthly Books of Peat Grounds, and how to find them, he has diſcovered ſuch Ground in his Eſtate; and, having burnt ſome Quantities of it, its Aſhes have ſurpriſed all the Country about him, by their making uſe of them as a Manure according to my Directions, for increaſing Crops of Grain, natural and artificial Graſſes, Turneps, and many other Sorts of Vegetables, of which Sort of Diſcovery I am the firſt of Authors; and, how valuable ſuch a Diſcovery muſt be in Time to the King's Dominions, may be eaſily comprehended from the infinite Advantages that in Courſe will ariſe therefrom, both in Gardens and in Fields, as I have in Part given an Account of in my Works; and, ſince this Letter came to my Hands, I hear another Gentleman has had the like Succeſs, who was greatly reduced in his Circumſtances, but by this Diſcovery is like to be re-inſtated in his former ſplendid Condition. Another informs me, he has received a ſurpriſing Advantage by putting in Uſe my Salt-petre Receipt, that produced him ſix Quarters of Barley on an Acre of a wet, clayey, flat Soil, where three Quarters were deemed a good Crop; and in another County, by Vertue of the ſame *Menſtruum*, where they uſed to have, in a very dry Summer, but a Coomb, or four Buſhels of Barley on one Acre, their poor, ſandy Lands have yielded as many Quarters in ſuch a Seaſon. Another, that my excellent Receipt, for preventing the Rot of Sheep, ſaved his whole Stock in the Year 1735, that was thought to be the moſt fatal Year

for

for rotting Sheep known in the Memory of Man; a Truth vouched to my Face by no leſs a Perſon than a Member of Parliament, ſince deceaſed. Another that a Banking-plough I ſent him, is like to clear a Park of three Hundred Acres of Mole or Piſſum Banks, which are ſo large, that I hear they have been making more than a Century. Another on the Receipt of the Drill-plough, and Horſe-break, ſays, that he approves of them on firſt Sight, and admires them, as a moſt ingenious Contrivance; and ſo ſeveral others who have received great Benefits by Means of my Writings that have gone into the World.

*The Copy of an Anſwer ſent to this ingenious Gentleman's ſecond Letter, by the Author.*

*Little Gaddeſden*, 18 *December*, 1743.

*SIR*,

YOUR Letter of the 2d of *December* is with me, and I ſince have endeavoured to get a well qualified Ploughman for your Service, that might anſwer your Deſire; but it is not in my Power ſo to do this Time, becauſe I cannot engage one to my Mind; and I am the more timorous on this Account, leſt I ſend you one that will riſque my Reputation, as being not duly capacitated for your Buſineſs, for then it is doing you and myſelf Harm; which obliges me to write to you, that the Three-wheel Drill-plough is ſo cleverly contrived, that it will work the ſteadieſt of all Ploughs; inſomuch that it is apt to make the Ploughman careleſs, and let it be drawn throughout a very long Furrow, without his laying hold of its two wooden Handles, which Property of this excellent Plough is in Favour of a Noviſt Ploughman; becauſe moſt, if not all other Ploughs, require more Skill and Pains to hold

for

for guiding them right than this does, by Means of the Support of its Third Wheel. And altho' it has Three Wheels, wrung with Iron about two Feet Diameter each Wheel; yet it may be juſtly called a *light* Plough, lighter than the Two-wheel Turnwriſt-plough, the Two-wheel *Hertfordſhire* Fallow-plough, the Two-wheel Chip-plough, or Two-wheel Weſt-country Sull; and as the Seed is contained in a Hopper, that holds ſomething more than a Peck, there cannot well be any Miſtake committed in dropping it out in too little or too great a Quantity, or awry, by reaſon it is confined to a right and regular Diſcharge of it into the Furrow, immediately after the Share has opened it. There is here likewiſe leſs Danger in the making a ſtraight Furrow, than in the working of any other common Plough; for that the Hind or Fill Horſe is faſtened in a pair of light wooden Shafts that is always ſold and ſent with this Plough; and, if there is any other Horſe or Horſes to be added, they draw in a ſingle Length, and not double in a Breaſt, as ours do in our *Hertfordſhire* Wheel-ploughs. And as for ſhifting the little Seed-box, it is eaſily and preſently put on the round ſolid Iron Spindle, whether it be that for Sowing Wheat or Barley, or that for Oats, or that for Beans, or that for Peaſe, or that for ſowing Graſs or Turnep-ſeed out of it; and, when one of theſe is fixed on a Spindle, it is not to be taken off and ſhifted, till all the particular Seed is ſown by it; ſo that there is not that Difficulty in the working of this plain Plough, that, perhaps, ſome may apprehend; and therefore by ſuch plain Directions as I ſhall ſend with it, and your Judgment withal, I preſume a Ploughman of your own will be capable of managing this Three-wheel Drill-plough, Horſe-break, and *Dutch* Hand-hough to your Satisfaction,

The

The next Inſtrument, that I ſhall remark on, is the moſt profitable Horſe-break, which is ſo plain a Tool, that there is no Difficulty, I believe I may ſay at all, in underſtanding how to work it; becauſe, when this is to be made Uſe of, it is only taking off the Drill-plough from the Carriage, and faſtening it by a Swivel to the Horſe-break, which is done in a Trice; and then a Horſe draws it between the drilled Rows of Beans, or Peaſe, or Turneps, *&c.* to tear and looſen the interval Earth, that by the Earthen-iron is turned in, an Inſtant on the Roots of Corn or other drilled Vegetables; for this Horſe-break, by its ſeveral light Irons, is of great Service, not only in Fields, but likewiſe in Gardens, where there is Room enough to work it, as being the very beſt Machine that ever was invented by Man for drawing between Rows of Nurſery-trees to clear the Ground of Weeds, making it fine and porous, and then laying it on their Roots; all which Three great Services this particular Sort of Horſe-break performs at one Draught-Motion, in the moſt eaſy, moſt expeditious, and moſt cheap Manner; ſo that a Gentleman, who buys this Inſtrument, is furniſhed with one of the beſt Conveniencies for improving his Garden-beans, his Rouncival Peaſe, his Savoys, his Cabbages, and many other Sorts of culinary Plants, by drawing this Horſe-break between their Rows once or twice in the Seaſon. Therefore, whoever ſends to me for this Horſe-break, they ſhould let me know not only the Uſe they intend to put it to, both in Field and Garden, or plowed Orchard, but likewiſe the Nature of their Soil and its Situation, that I may order one to be made according to the ſame; which is an Advantage any Perſon has by ſending for theſe Inſtruments more certainly than by ſending to the Plough-maker for them, who, in Courſe, would make

make them at random, for there are ſeveral Dimenſions of its Wood and Irons, and Faſhions of its Making.

A Third Inſtrument is the *Dutch* Hand-hough, that coſts about half a Crown or three Shillings; this is likewiſe of vaſt Service, when made Uſe of in cleaning the Interſpaces of the Land, between the Rows, or Drills, of Wheat, Barley, Oats, *Lucerne* Graſs, and ſuch like Vegetables; becauſe, when theſe are ſown in Fields, they are generally drilled in at twelve Inches Diſtance in Rows, which does not allow Room enough for drawing the Horſe-break between them; beſides, as all theſe have very tender Stalks and Roots in their green Age, they are not able to bear the Preſſure of ſo much Earth that muſt be laid near them, if the Horſe-break was employed, which a Bean, a Pea, and other ſtronger Vegetables can more eaſily endure, much leſs a Hough-plough. Again, by the Sowing of theſe ſmaller Seeds at a Foot Diſtance their Rows, there is the more Ground employed, and in Courſe more Corn obtained, than if they were ſown at a much wider Diſtance in Drills, for their being houghed by a Horſe-plough; and it was partly, I ſuppoſe, for theſe Reaſons, that the Horſe-hough-plough came into leſs Uſe and Reputation than formerly, becauſe it took up conſiderably more Ground to work in, than this *Dutch* Hand-hough, or Horſe-break, which ſupply the Roots of Vegetables with the Food of freſh Earth in a much ſafer and more profitable Manner.

The fourth Inſtrument is one that I have not yet particularly deſcribed in my Books, becauſe a ſingle Gentleman, about your Age, and of a Thouſand a Year Eſtate, lately invented it, and ſent it me by a Waggon, ſeventy Miles, as a Preſent, deſiring me, by no Means, to make it publickly

lickly known, that I might, with the more Aſſurance, enjoy its profitable Properties; which are, *Firſt*, It will ſeparate all the ſmall from the larger Kernels of Wheat and Barley, and likewiſe free them from the Seeds of Weeds, which neither the great upright Wire-ſcreen, nor any of the common Sieves, nor Fan, nor Throws by the Caſting-ſhovel can do: From whence ariſes this infinite valuable Conveniency, that a Perſon may, by this Means, obtain the boldeſt, largeſt, and cleaneſt of Seed; and then he has a ſure Reaſon to expect a Crop will yield a Grain of a proportionable Goodneſs to ſuch ſown Seed, and he thus become Owner of Crops of Wheat, or Barley, that none in the Country beſides can equaliſe; for this one ſingle Tool prepares the Seed of both theſe for Sowing in the greateſt Perfection, and, by this, he will not only ſell his Grain ſooner than his Neighbours can, but likewiſe for a greater Price. This is Fact, and what, I will engage, it ſhall perform, provided the Ground is firſt duly prepared by ſeveral Plowings, till it is got into a fine Tilth. How valuable then muſt ſuch an Inſtrument be, not only to all Gentlemen and Farmers who ſow more or leſs of theſe Grains, but alſo to the Nation in general, may be eaſily comprehended from the Account I have here given of it; for if all our Farmers can get larger-bodied Grain than heretofore they have done (which they may eaſily do) it will not only ſell for more Money at Home, but likewiſe Abroad, beyond any that is exported into foreign Parts by other Nations, that know not the Uſe of this Tool, or any other that can perform the like Effects. Thus *Great-Britain* and *Ireland* may receive infinite Advantages by the Uſe of this Tool; and, as Trade is the chief Support of theſe Nations, I hope, I ſhall hereby (as I have done in many other Branches by my

publick Writings and otherways) greatly contribute to my Country's Welfare. Now this moſt ſerviceable Tool is of ſo ſmall a Bulk as to lie almoſt in the Room of a Peck Loaf, and ſo cheap, that I can afford it among other Things that may be bought of me for half a Guinea Price; and, as it is ſo ſmall an Inſtrument, it may be ſafely carried to great Diſtances for the Charge of a Shilling or two, to pack it up between Boards, for defending it from Caſualties. This Tool, therefore, if you pleaſe, I will ſend with the Drill-plough and Horſe-break and *Dutch* Hand-hough, and then you will be compleatly ſet up to enjoy *multum in parvo*. But then, by all Means, the Knowledge of it ſhould be kept as private as poſſible; for, if it is publickly known, and others uſe it as well as you, you will not have the Benefit of it in ſo large an Extent as otherwiſe you may; yourſelf for Diverſion or Exerciſe, or a Man, or Boy, or Girl, or Maid-ſervant, may ſelect the beſt Seed by it; for this ſmall Tool is not to be uſed till after the Wheat or Barley is prepared for ſowing in the common Way of preparing it. And, if you are deſirous to oblige an intimate Friend with this Tool, I ought to have the Privilege of ſending it him; for, indeed, it is my juſt Property by the free Gift of a generous Gentleman, who, by falling in Love with my Books, was pleaſed thus to endeavour my Intereſt, and make me the ſole Proprietor of his ingenious Invention; and if other Gentlemen would do ſomewhat of the like, in any other different Manner, an Author, as I am, would be encouraged and enabled to ſend into the World ſuch future Works as would be of great Service to it; for I am not only forced to travel now and then, but to be otherways at great Expence, for obtaining thoſe

uſeful

uſeful Secrets, which elſe, perhaps, might never be known in Public.

I am ſorry to hear of your Affliction by the Gravel and Stone; I know a Gentleman of eighty Years of Age, who has partly preſerved himſelf from the fatal Effects of the Gravel, by Means of taking now and then as much ſcraped *Caſtile* Soap as will lie on a Shilling in warm Ale; for this Ingredient is well ſtored with the Salts of Vine-aſhes, and is of a moſt ſlippery Nature. I can tell what will prevent any Perſon's having the Wind-cholic, half a Year together, for Two-pence Charge; not that I pretend to the Knowledge of Phyſic, but to make known what I learn, confirmed by the long Experience of others and myſelf: And I adviſe you, for your Diſtemper, to drink, chiefly, a Table-beer made only with Treacle, or Moloſſoes, and Water; boil nine Pounds Weight of this in thirty Gallons of Water, without Hops, one Hour, and work it with Yeaſt. It is of a moderate opening Nature, and, therefore, very much prevents the Breed of the Gravel and Stone, and other Diſeaſes, too long to mention here; inſomuch that I have known ſome that dare not live, without the Uſe of it.

As you obſerve the Drill-plough and Horſe-break may be commodiouſly ſent you by Water to ———, and, as all the Inſtruments may be made in three Weeks, from the Time of my ordering their Making, they may be ſent you ſoon enough to ſow Beans, Peaſe, Barley, Oats, or Graſs-ſeeds; and, if you pleaſe, I will ſend you one Buſhel in all, to breed more from, of the biggeſt Sort of Peaſe in *England*, the grey Rouncival, an excellent eating Pea, both green, and when full ripe, with Bacon, Pork, or in other Forms; or, the great blue Rouncival Union-pea, or the Rouncival White Non-paril Pea, or a

Buſhel of each; for theſe will grow well, if drilled out of the Three-wheel Drill-plough, and afterwards horſe-breaked. Theſe I ſowed in Drills this laſt Spring, and had a good Return.

I have juſt been ſending Kerroon Cherry-trees, Parſnip Apple-trees, Beechen Sets, and white Elder-tree Cuttings, to two Gentlemen in the *North*; and I would adviſe you to let me ſend you a Quarter of a hundred of Kerroon Cherry-trees, by the Ship the Plough goes by, for they will coſt you but one Shilling a Piece, beſides Carriage; and, by a particular Way of packing them up, they will keep without Damage a great While. I am,

*S I R,*

*Your moſt obedient humble Servant,*

WILLIAM ELLIS.

*P. S.* I have juſt now met with a Ploughman Servant, who, I believe, will anſwer your Purpoſe. He expects —— a Year. I will have his Character from his laſt Maſter, and, if it is to my Satisfaction, he ſhall come ready qualified to hold the Drill-plough, Horſe-break, *&c.* Pleaſe, therefore, to let me have your ſpeedy Anſwer.

## CHAP. XI.

### *Of* Plowing.

*OF the great Importance of timely and ſkilful Plowings.*—— This Month of *April* is the firſt and moſt general Month in the Year, which is

is obſerved, throughout the *Southern* Parts of *England*, for Fallowing, or firſt Plowing up all ſuch Lands, the ſtiffer Sort eſpecially, that are to be ſown with Wheat, in *September* or *October* next. And, as this is the main Article in all the Art of Huſbandry, it requires the greateſt Care to obſerve; for many have been ruined for the Neglect, or the unſkilful Management of it. And, although it is of all this great Conſequence, yet, I am bold to ſay, that no Author of all the more learned Number than myſelf, has given a tolerable Account of it; for neither the Logician, nor Rhetorician, can here diſplay their Parts, without knowing the Field-practice of this ſuperlative Art. The moſt ingenious Mr. *Tull*, who has exceeded all Authors whatſoever, myſelf included, in Writing on the Drill-Husbandry, has hardly medled with the common Art of plowing Land, neither in *Chilturn* nor Vale-Countries; an Undertaking of great Difficulty, becauſe of the many different Soils that are to be plowed with various Sorts of Ploughs, proper to their ſeveral Natures and Situations, in the moſt convenient Seaſons of the Year. This Subject is ſo copious, ſo diffuſive, and ſo ambiguous, that, at beſt, I muſt profeſs myſelf a deficient Author in my Writing of it; nor could I do what I do, had I not travelled for improving my Judgment, by ocular Demonſtrations, as well as by the Converſation of Thouſands; which gives me ſome Reaſon to ſay, with Submiſſion, that I have expoſed many Branches of this excellent Art of Plowing, even more than any one before me has done. The Gentleman is above concerning himſelf in the practical Part of this Inſtrument, the Plough: The Farmer is the fartheſt of Men from diſcovering his Ways of managing it; and the Ploughman Servant the moſt of all out of the Queſtion; ſo that here

appears

appears little Room to expect this Art ſhould be publiſhed in Books, by a Practitioner of it, notwithſtanding the great and neceſſitous Reaſons there are for ſo doing; for it is undoubtedly the Duty of all true Subjects of the Common-wealth, to endeavour its Welfare, and contribute what conveniently lies in their Power towards making it a Land flowing with Milk and Honey; that is to ſay, with all Kinds of Plenty, that we may be able not only to enjoy this ultimate End at Home, but be capacitated to furniſh foreign Countries with our Commodities, that are chiefly raiſed from this famous Art of good Plowing, and which we can well ſpare as our Super-abundance, to the infinite Advantage of Trade in general. If Ground is not rightly and duly plowed, how can the Farmer get ſufficient Crops of Corn, artificial Graſſes, Turneps, Rapes, and many other ſerviceable Vegetables? And, if he has not full Crops, how can he breed and feed Cattle in Perfection? And, if this is not his Caſe, how can he become Owner of thoſe Quantities and Numbers of Things requiſite, in the firſt Place, to enable him to pay his Rent, to maintain his Family, and do his Country Service? In ſhort, was I to enumerate and diſplay the many Advantages accruing to a Nation from the Uſe of this excellent Inſtrument, the Plough, it would take up *Folio* Volumes to contain them, and I muſt ſhorten my Pen in this Place from enlarging ſo much as I otherwiſe would do.

*Of the Difference of Ploughs, and why ſome are more proper to plow particular Soils than others.* ——The many Sorts of Ploughs, now in Uſe in this Nation, ſhew the Neceſſity there is of employing a right one in a Soil proper for its Working; and, although ſome Ploughs have been made Uſe of Time out of Mind, in certain Places, as the beſt

beſt Sort that could be got and employed, as being believed to be ſuch, that none could be invented to exceed them; yet Time, Ingenuity, and Experience have proved ſuch their aſſured Opinion to be wrong founded, and convinced many Farmer, that others, lately diſcovered, have better ſupplied the Room of the old Ploughs; witneſs, the Two-wheel Jockey-plough of *Norfolk* and *Suffolk*, where, before this, they made Uſe of the Foot-plough; likewiſe, the Two-wheel Chip-plough, the Draught-plough, the One-wheel Plough, the Fen-plough, the Bobtail-plough, the Patent-plough, the Two-boarded Swing-plough, the ſeveral Drill-ploughs, and others that I could name; which are all, or moſt of them, new-improved Inſtruments, that perform their Work much better, than the old-faſhioned Foot or Wheel-ploughs; and it is from hence that I take the Opportunity of Remarking on the Benefit that ſome Farmers enjoy, in laying by the Uſe of a certain very large Two-wheel Plough; a Plough rather more weighty than the great *Weſt* Country Sull, and more poiſant and bulky than any of our *Hertfordſhire* Sort of Two-wheel Ploughs. This Plough, I ſay, ſeveral Farmers laid by for uſing a better one in their gravelly Soils, called a *Swing-plough*, made with two Boards on its Sides; one called, *the Mould-board*, lying in a ſtraight Poſture on that Side of the Plough *next the Land*, as we call it in *Hertfordſhire*; the other is a Bending-board, fixed on the Furrow-ſide of this Plough, which, by ſeven or more Notches in an iron Cock, at the End of the wooden Beam, is faſtened to the Geers, and them to the Cart-ſaddle on the Hind-horſe, by which it becomes a Swing-plough, becauſe it partly hangs on theſe Geers at Turnings at the Land's Ends. Now, this Plough may be made to be not only One-third Part lighter than the old

Two-

Two-wheel Ploughs that were formerly uſed in its Stead, but it is to be drawn by Horſes in ſingle Rows and one in four leſs in Number than was employed to draw the Two-wheel Plough double in a Breaſt; which is a Conveniency of very great Service to a Farmer, for, by this Mode of Drawing, the Horſes go in the laſt Furrow, and thereby miſs Treading and Baking, as it were, the Ground down ſo cloſe, as to make the Plowing of the leſs Service. The next Conveniency is, that this Sort of Swing-plough will plough the Ground much ſhallower, than any Pecked-ſhare Wheel-plough can, and yet deep enough, upon Occaſion; when it is wanted to plow ſhallow, it is much to the Advantage of all ſuch Wheat, or Bean, or Pea, or Thetch-ſeed, that is firſt ſown Broad-caſt over the Land, and plowed in, becauſe, by this Means, if the Surface of the Ground was in moſt Heart, as it generally is, it is to the Benefit of the Crop; for, in Caſe Rains fall in a plentiful Manner after Sowing, the Goodneſs of the Top-earth will waſh down on the Roots of the Corn, and greatly nouriſh them; or, if very hot and dry Seaſons follow, the Roots will lie much ſecurer from the parching and ſometimes fatal Heats of the Sun, than thoſe from Seed only harrowed in. Another great Conveniency of this Swing-plough is, that, whereas ſome of the Two-wheel Sort of Ploughs, in working among ſtiff Loams or clayey Grounds, will carry along with them near half a hundred Weight of Dirt, which they gather up and lodge by its wooden Sheaf, its hind Staple, its two-mortaiſed iron Share, and other of its wooden Parts, ſo that the Horſes have a much greater Weight to draw through ſuch ſtiff wet Soils, Days together, and the Ploughman a much heavier Plough to guide, and Burthen to bear at the Land's End, while ſuch a Two-wheel Plough, thus loaden, is turning

round

round at it, when great Part of this Fatigue and Damage is much of it avoided by the Working of this lighter Swing-plough, that by its two Boards is made capable of reſiſting the Lodgment of much Dirt or Stones, by Reaſon the two broad Boards fling them off, and leave them behind; ſo that this Plough works in light and clean Order, both for Horſes and Ploughmen, in any Sort of Ground it is uſed in. The next and laſt Conveniency, that I ſhall here mention of this excellent new-invented Plough, is, that it comes to little Money when made. The Wood, the iron Socket, Share, *&c.* and Making, amounting to no more than one Guinea in all; which is ſo ſmall a Price, for ſo uſeful a Plough, that, I think, none can well grudge to lay out this Money for an Inſtrument that will do all Manner of Work in gravelly, chalky, ſandy, and in dry, and wet loamy, or clayey Grounds. In ſhort, it is the moſt general Plough of all others that I know of, for Plowing in all Grounds, except in Ridge Vale-Lands, in Fen-Lands, in Marſh-Lands, and too ſtony Lands, which are Soils that require, each of them, one particular Sort of Plough. Now this cheap, light Swing-plough I furniſh to any Perſon for the Price before-mentioned, paying me for my Charges of ſending it him.

*Of Plowing Ground in this Month, preparatory for ſowing the ſame with Turnep-ſeed hereafter.* — This Diſcourſe is not writ in Behalf of the Vale-Farmers, who rent ſuch low, wet, ſtiff Land, as forces them to lay it up in a Ridge Poſture, for avoiding the Damage of Inundations of Waters; becauſe it is not to the Intereſt of thoſe to ſow Turnep-ſeed, for Reaſons I have heretofore ſhewn in my Works, altho' the ſame is ſo much in Favour of the *Chilturn* Farmer, that, next to Wheat-crops, I believe I may ſay, Turnep-crops are

the next chiefeſt Profit, becauſe they not only employ the Land the fallow Year, and lay it under a profitable Crop, while it would otherwiſe lie idle; but, by the Turneps being fed with Sheep, the Farmer obtains a Dreſſing worth ſometimes twenty Shillings an Acre; for ſuch Dreſſing oftentimes ſo enriches the Ground, that with a little more Help (and ſometimes it will do the Feat without any) it will return the Farmer an excellent Crop of Wheat, or Barley; but, as a full Crop of theſe is not to be expected, unleſs a due Preparation is made for the Turnep-crop, a right *Chilturn* Huſbandman takes timely Care to fallow, or, to be plainer, plow up his Bean, or his Pea, or his Oat Stubble in *November* for the firſt Time, in order to let the ſame Land lie to be improved by Froſts and Snows; for, if theſe happen in any great Degree, it will be much the better for it; the Froſts will ſweeten and ſhorten it, and kill the Weeds, which perhaps hereafter would greatly damage the Corn-crops, that are to ſucceed. The Snows likewiſe very much contribute to improve the Land with their nitrous Quality; but I muſt check my Pen here, and forbear Enlarging on this, for a more proper Opportunity, and ſay, that, after the Ground has been once plowed for Turneps, we commonly let it lie till this Month, before we plow it a ſecond Time, which is called the firſt Stirree for Turneps, in order to plow it a third Time in *May*, or *June*. But to be more particular in this my Account, of preparing Ground for a Turnep-crop, whether it be a gravelly Loam, a chalky Loam, an intire ſhort Loam, or a ſtiff Loam; I ſay, whether it be any of theſe, we in *Hertfordſhire* generally plow an Oat, or Pea, or a Bean-ſtubble up, the firſt Time in ſingle Bouts, a Form the beſt of all others, becauſe it lays the Earth up in the higheſt

Poſture

Poſture that a Plough can do it in, and thereby expoſes it to the Power of the Air, and conſequently to the Froſts in the moſt exalted Manner, for the Deſtruction of the Seeds of Weeds, and Shortening and Sweetening the Ground; which it ſeldom fails to do, becauſe it has a whole Winter Seaſon to do it in. Then, as I ſaid, in *April*, a judicious Farmer will plow it a ſecond Time, by bouting it again off the laſt Bouts; and then, I believe I may ſay, the whole Surface of the Land has been removed, or ſtirred to Perfection; yet that it may be made intirely fine and ſweet, in the next Month of *May*, this ſame Land is to be back-bouted, and thereby prepared for the Work of the Harrows, for theſe have not been made Uſe of all along; now, about the latter End of *May*, the Harrows are to be employed in harrowing the Earth plain, in order for the Farmer to lay on it his rotten Dung; which when ſpread all over the ſame, in *June*, he will plow it into the Ground, and then the whole Surface of the incloſed Field is ready to receive the Turnep-ſeed, that is to be ſown and harrowed in. Thus I have given one particular Account of the Proceſs of preparing an Oat, a Pea, or a Bean-ſtubble, for a Crop of Turneps. But there are ſeveral other Ways of doing it, according to the Nature of the Earth, and a Farmer's Fancy, which, if I was to write here, would take me up more Room than I can at this Opportunity ſpare; and, therefore I ſhall proceed to obſerve, that where a Farmer deſigns to get ſo early a Crop of Turneps, as to draw and ſell in *July* or *Auguſt*, or ſooner, he ought to prepare his Ground accordingly; which leads me to write on farther Particulars relating to Turnep-crops.

*Of Sowing Turnep-ſeed in* April, *for drawing Turneps to ſell in* June, *or* July. — To do this, the Soil ſhould be of the warmer, lighter, and drier

Sort; and therefore a gravelly, a chalky, a ſandy, or dry Loam ought to be the Land choſen for this Purpoſe; for, to bring this Deſign to good Effect, the Earth muſt be proper for it, as well as the Seed. Now, according to the Nature of the Ground, ſo ſhould the Plowings be performed; if it is a ſandy Soil, it ought not to be plowed ſo ſoon as *November*; it will be better done, for the firſt Time, in *February*, and again in *March*, for ſowing it in *April* with Turnep-ſeed, for this Soil is preſently made fine; if a Chalk, or a Gravel, they may be plowed, the firſt Time, in *December*, or *January*; if a Loam, in *November*, for ſeveral Reaſons I could aſſign; but I ſhall wave a Diſcourſe on theſe Soils, for another Place, and here take Notice, that when the Ground is duly plowed, and dreſſed ready for Harrowing in the Turnep-ſeed, the only Sort, for growing quick into a Crop, is the Seed of a *Dutch* Turnep, which, in a rich Soil, if the Weather is favourable, will grow into Turneps big enough to pull in leſs than three Months Time; and, as they, at this Time of the Year, run very expeditiouſly into ſuch a ſerviceable Size, their Skins will be thin, and their Inſide excellent, for growing in theſe ſweet ſhort Soils; much ſweeter, than thoſe that grow in ſtiffer Grounds, or where any others are loaded with a rank Dung; and, for this Reaſon, it is, that our *Hertfordſhire* Turneps carry the Bell, or Preference, at *London*; becauſe thoſe, that we ſend there, generally grow in a gravelly loamy Soil, firſt dreſſed by the Dung and Stale of Sheep, or by preceding Crops of Clover, or with Clay, or Peat Aſhes, *&c.* which are all ſweet Nouriſhers of theſe delicate, white-ſkinned, flattiſh Turneps. And, when a Farmer can get an early Crop of them, he enjoys the moſt profitable Opportunity of all others in ſelling them for the moſt Money;

Money; the firſt Turneps at Market make the Rarity, and that the greater Price; for it is both a great Pleaſure and Conveniency to eat theſe Turneps in *June*, *July*, and *Auguſt*. A Pleaſure, becauſe it is a very ſweet Sort of Turnep, when timely drawn and ſold; and no leſs a Conveniency both to the Townſman and Countryman, becauſe an early Turnep is generally the firſt cheap, ſerviceable Boiling Root, that all can make Uſe of; and this the Farmer in Particular experiences, when he can have them to boil in Harveſt-time, with his Bacon, Pork, or Beef. Thus I have given you a ſhort Account of ſowing Turnep-ſeed in the old Broad-caſt Way of ſowing it; which I have further and more particularly wrote on in my former Works.

*Of Sowing Turnep-ſeed in Drills in this Month.*— This Mode of ſowing Turnep-ſeed in Drills, I am ſenſible, is a new Piece of Huſbandry, known to few, and conſequently the Propoſal ſlighted by many; as almoſt all new Improvements are, till they, by many Years Experience, become Perſuaſives of Imitation. But, as I am an Author, it is not my Buſineſs to retard my Pen on that Account; for, if I can ſhew the rational Practice of a new Improvement, I think myſelf under no Obligation to forbear publiſhing it. And this of ſowing Turnep-ſeed in Drills, I am certain, is a moſt rational Invention, becauſe many Acres, I may ſay, great Numbers of Acres, that have been ſown this Way, have proved the profitable Effect of ſowing Turnep-ſeed in this Form; witneſs not only what that excellent Author Mr. *Tull* has wrote on this Head, and experienced beſides; but likewiſe what the late very ingenious Sir *John Dalrymple* mentions, in his Letter to me of ſowing Turnep-ſeed in Drills, which he ſays produced large

larger Turneps than he ever ſaw in *England*; becauſe, I ſuppoſe, he dreſſed the Ground thoroughly well in the firſt Place, and then drilled in the Seed in a right Depth, as you may obſerve by the Copy of his valuable Letter that I inſerted in my laſt Monthly Book for *March*. And I do ſay the like good Piece of Husbandry may be as well acted in *England*, as it was by him done in *Scotland*. His Turnep-ſeed, I ſuppoſe, was drilled in a ſtiff Soil, becauſe he ſays he drew the Turneps, and carried them into another Field, which I preſume was a Meadow, or drier Arable Soil, where the Sheep could feed on them in clean Order, without ſtolching the Ground, or daubing the Turneps; for Turneps ought not to be fed off by Sheep in very wet, ſtiff Land, becauſe it will help to rot them, inſtead of fattening them, if they are forced to feed on ſuch Turneps ſome Time; and therefore Sir *John* was very much in the right of it, to draw them out of this Soil, and feed the Sheep on them in a better; which not only contributed to the Health of theſe moſt valuable Creatures, but their Dung and Urine would better agree with a dry Soil, than a wet one. Now, to do this Piece of good Husbandry in this Month, ſow the Seed out of the Hopper of a Drill-plough, by a Seed-box cut purpoſely for the ſame Uſe; and, if the Earth is ſo ſtiff that it will not fall in of itſelf, immediately after the Seed for covering it, a light Harrow muſt be drawn over the Drills, and it will do it effectually. Thus you may ſow Turnep-ſeed in Drills at one, two, three- four, or more Feet Diſtance the Drills, by the Three-wheel light Drill-plough; and where it is thought proper, Rape-ſeed may be ſown in the Interſpace or Interval between the Drills, as Sir *John Dalrymple* did, to the higheſt Improvement of the Ground. And why Turneps thrive beſt,

and

and grow largeſt, and ſweeteſt, by being ſown in Drills, is eaſily made appear by rational Proofs.

*Of Sowing Peaſe between the Drills of Turnep-ſeed.* —— At the ſame Time that Turnep-ſeed is drilled in this Month, you may drill in blue Peaſe, or white Peaſe, in the Intervals of Earth; that is to ſay, after you have drilled in your Turnep-ſeed at four Feet, or more Diſtance, throughout the Field, you may, in the next Place, alter the Seed-box, by putting in that which is made to ſow a large, or ſmall Pea, and drill them in Drills made at eighteen Inches Diſtance, or as the Owner thinks fit, between the Rows of Turneps; by which Piece of Management, the Peaſe may be houghed at the ſame Time the Turneps are, if the Ground is in rich Order, and a kind Seaſon of Weather timely follows; and, as theſe two Sorts of Vegetables are ſown much at one and the ſame Time, they may, perhaps, be got off near the ſame Time, eſpecially if a forward Hotſpur whitiſh Pea is ſown among the Turneps; for then both Turneps and Peaſe may be ſo early cleared from off the Ground, that either a Crop of Winter Turneps may be had off the ſame, or a Rape-crop ſet on; or Wheat may be ſown in *September*, or *October*, to ſucceed the Turneps, and Pea-crops. This is Husbandry, indeed, and which may be carried on in a Thouſand and ten Thouſand Places, where they practiſe no ſuch Thing; nor can it be expected to be done, unleſs Gentlemen of brighter Parts, and heavier Purſes than Farmers have, lead the Way, and convince them by the only Rule of Perſuaſion, ocular Demonſtration, and Experience; for, indeed, it is the Intereſt of moſt Gentlemen, who are poſſeſſed of landed Eſtates, ſo to do; becauſe, by this, they will have their Rents better paid, as well as the Tenant ſecured from Breaking. The Example of Mr. *Clements*, Landlord,

lord, that I have formerly mentioned in my Works, making a Preſent of the Three-wheel Drill-plough to him *Gratis*, and ſending it him by the Sea three Hundred and more Miles, I ſhould think, might prove a ſufficient Incentive to many others to do the like; for, if his good Landlord had not found out and learned the great Advantage of this excellent Plow, it is very probable his Tenant had not enjoyed it in his Life-time, and then he would have been deprived of that valuable Opportunity of Sowing the ſame Field every Year with Corn, or artificial Graſs, or Turneps, without impoveriſhing the Ground, free of ſuffering the Loſs of every third Year's Crop, according to the common *Engliſh* Mode; which obliges a Farmer to leave it fallow that Year for Plowing the Land ſeveral Times, only to fine and ſweeten it for the Reception of a Wheat-crop, *&c.*

*Of the great Service a Crop of Rapes is to a Farmer in* April. — The Value of this moſt ſerviceable Vegetable is known to few Farmers in this Part, where I live; and therefore few, very few there are, that ſow the Seed of them, becauſe we lie too far from *London* to enjoy the Benefit and Advantage of them in the Manner that ſome do, who live nearer that Metropolis, and carry on the Suckling of Houſe-lambs. I know of none within a pretty many Miles of me, that ſow this Seed, beſides a Nobleman's Bailiff and myſelf. The Nobleman's Bailiff ſows it for his Maſter's Store-ſheep, for feeding his Weathers and Ewes in *March* and *April*, and I mine; for then we bait them a few Hours in Day in the Rape-field, as the only green Meat we have left, becauſe it is the Caſe of many to be without any other at this Time of the Year than this of Rapes, by Reaſon artificial and natural Graſſes, as well as Turneps, are generally eaten off before theſe Months. But the main

Deſign

Deſign of ſowing Rapes is to feed Ewes that ſuckle Lambs, either for fatting thoſe Lambs that are brought up in the Houſe, or the Field, and for the Service of the Kitchen. It is theſe Rapes that are of ſo hardy a Nature, as to withſtand the Violence of Froſts, beyond all the Garden Ware of this Tribe; when Cabbages, Savoys, Brockly, and the like were killed by the Vehemency of the Froſts, theſe have ſtood ſound, and ſupplied their Room, as ſeveral Acres of them did in the hard Froſts of 1739 and 1740; and, had it not been for theſe ſerviceable Plants, there had many Lambs been loſt; therefore, whether in froſty or open Weather, in theſe Months, the Rapes are of great Value, as being not only a moſt ſucculent Plant, that produces a great deal of Milk, but they likewiſe fatten Sheep and Lambs very expeditiouſly; ſo that no Farmer, that is Maſter of a proper Soil in a convenient Situation, ought to be without the Enjoyment of this excellent Food.

*Of Plowing and Preparing Ground to ſow Rape-ſeed in.*—— This Seed agrees beſt with ſtiffiſh or moiſt Loams, but it will grow well in dry Loams. The Management lies in the Sowing them accordingly. If Rape-ſeed is to be ſown in ſtiff, moiſt, or wettiſh Loams, the Ground ought to be ſowed betimes, even ſooner than this Month, for reducing its ſurly Nature into fine looſe Parts, by the Month of *July*, when this Seed ought to be ſown in the ſame, that the Rape-roots may enjoy good Part of the Summer's hot Seaſon for forcing them to take large Hold of the Earth, and get forward Heads againſt the trying Winter's froſty Seaſons; by this the Plants will meet with the beſt Security againſt hard Weather, and yet, for all ſuch a forward Sowing of this Seed, that Rape-ſeed, ſown in a dry Loam in the Month of *Auguſt*, is oftentimes as forward in its Growth, as that

ſown in a wet Soil in *July*. Therefore whether Rape-ſeed is to be ſown in *July* or *Auguſt*, in a ſtiff or drier looſe Soil, the Ground ought to be early and duly prepared, for the Harrowing this Seed in; and, as Rape-ſeed is commonly ſown on the fallow Ground, if it has not been plowed up before this Month, do it now, either by Broad-land Plowings or Bouting it into ſingle Bouts, or in what we call *Four-thoroughed* Lands, or in three or four Boutlands, or in broad Ridge-lands. Theſe are all the beſt Poſtures that Land can lie in, that is of this ſtiff Nature, for the firſt Plowing of it, in order to get it ſweet and fine; for it cannot be too fine for this ſmall Seed; becauſe, in Caſe a Perſon was to attempt the getting a full Crop of Rapes in a ſtiff, ſowre, clotty Soil, if a great deal of the Seed is not buried ſo as never to grow, the Plants will be the longer enlarging their Roots, and getting a flouriſhing Head againſt Winter; and then, perhaps, when they are to be fed, there are only half Plants or Rapes; and what a Stunted Crop of Rapes, or any other Vegetable, yields, a Farmer knows by the Loſs he ſuſtains by his bad Husbandry; but this Seed is not always ſown in Tilth Grounds; for, where the Land is of a ſhortiſh, dry Nature, it is oftentimes ſown on Oat, or Pea, or Wheat, or Barley, or Bean Stubble on one Plowing only, and Harrowing in the Seed after Harveſt; and, when the Weather proves propitious, there are many good Crops of Rapes got this Way. But, for a more particular Account of this valuable Plant, I muſt poſtpone it for another Time.

*Of Plowing and Preparing Land to ſow Wheat-ſeed in.* — This Month of *April* is what we call the chief fallow Month of the whole Year, for fallowing up that Ground which is deſigned to be ſown with Wheat in *September*, or *October* next,

and

and is ſo generally obſerved for doing this Work in, that both the Vale and *Chilturn* Farmer make it their conſtant Rule to plow their Land for the firſt Time in this Month, in order to prevent the Growth of Weeds, and get the Ground into a ſweet Condition, and fine Tilth, by repeated Plowings and Harrowings; and, for this Purpoſe, a *Chilturn* Farmer begins to plow his Pea, Bean, or Oat-ſtubble up in Broad-lands, if theſe Grains grew in Broad-lands before: And this he does for the better Preparing it to be plowed in ſingle Bouts, or in what we call *Four-thorough Stitches or Ridges*, the next or ſecond Time of Plowing; for, when Ground is to be plowed into one of theſe Forms, it is neceſſary that it be firſt made looſe, and ſomewhat fine; which may be done by ſuch firſt Plowing of it into Broad-lands, and then Harrowing well. Now the Reaſon, why it is ſo neceſſary to thus prepare it for Bouting or Four-thoroughing, is, becauſe, if a Farmer was to attempt to raiſe up the Earth by the Plough to lie in ſingle Bouts, while it is in a rough, clotty Condition, it would Part of it be apt to fall down again into the Water-Furrows; and that, which ſo falls down, cannot receive the Benefit ſo well of the nitrous Air, as that which remains laid up. The ſame, when the Earth is deſigned to be plowed into four thoroughed Lands; it cannot lie ſo compact, and expoſed to the Advantage of Air, if this Work is to be performed, while it is in a ſurly clotty Condition. But this is not the Caſe of the Vale-Farmer, nor the *Middleſex* Farmer; for neither of theſe plow the Ground in theſe two Forms: The Vale-Farmer is obliged to obſerve the feweſt Ways of Plowing his Ground of all others; becauſe he is confined to employ his Foot-plough only, and that in plowing his Land always in the Broad-land Faſhion, by *ridging it up*, or

*caſting it down*, as they here call it; and as their Vale-ground is generally of a wettiſh, ſtiffiſh Nature, the Farmer, that neglects to fallow it up, in this Month of *April*, ſtands an ugly Chance of loſing great Part of his Wheat-crop, by the Growth of Thiſtles, and other Weeds, and the Coarſeneſs of the Earth, for which Reaſon a Vale-Farmer is more than ordinary neceſſitated to plow up his Ground in this Month; for it indeed ſometimes happens, that, notwithſtanding all his Endeavours to get his Land into a fine Tilth, by ſeveral Plowings, he cannot do it to Satisfaction in a very wet Summer, which either prevents his Plowing the Land in due Time, or renders his Plowings the leſs efficacious; for, when it is plowed in wet Weather, or in a wet Condition, it is to little Purpoſe; the Horſes had better be kept feeding at Home all the while, and more to the Farmer's Profit, than working them in ſuch a Manner, becauſe they ſtolch, harden, and help to ſowre the Ground, which the Waters alone do too much. The next and laſt Obſervation that I ſhall make of Plowing in this Chapter is, that the *Middleſex* Farmer is near as much obliged to plow his ſtiff three and four Bout-Lands up in this Month, as the Vale-Farmer is his; for, in ſeveral Parts of this County, their Ground is not only of a clayey, or a ſtiff, loamy Nature, but it lies in a very flat and wet Situation; inſomuch that, in ſome particular Parts of it, they are obliged to keep up their Land in a Ridge-Vale Form, leſt the Inundation of Waters overflow their Corn. But the general Part of their Soils does not lie ſo bad as all this; that which lies drier, they plow and commonly ſow in three and four Bout-lands, which altho' they, in this Form of Plowing, lie not ſo high, as an intire broad Ridge-land, yet they are thus made, by the many Water-Furrows on

their

their Sides, to lie dry enough to ſave the Corn that grows in them from the Damage of Waters, unleſs greater and longer Rains than ordinary happen. Here they commonly fallow in eight Furrows, or four Bout-lands, that they may the better next Time plow them in the very ſame Form again; for, by this Means, they break the Earth pretty well with their ſingle boarded Swing-plough, becauſe they remove moſt of it from its former Situation, and thereby ſhorten and ſweeten it. But notwithſtanding all their Efforts to bring their Land into a fine Tilth by *September* or *October* next, for ſowing the ſame with Wheat-ſeed: When a very rainy Summer happens, they ſometimes cannot bring this to bear to their Mind, by reaſon the Waters hinder their After-plowing in due Time; and, when they do, perhaps their Ground will be little or nothing the better for it; yet plow they muſt, if it be only to check the Growth of the Thiſtle and Couch-Graſs, which, otherwiſe may become the Farmer's Maſter. Therefore it highly concerns all Farmers, who occupy ſuch Soils, to begin their Fallowing, or firſt Plowing for Wheat, early in this Month of *April*.

## CHAP. XII.

*The Copy of a Letter from a Lord, to furniſh him with* Kerroon Cherry-Trees.

*SIR,*

THE Earl of —— deſires you will ſend him ten *Kerroon* Cherry-Trees, by leaving them with Mr. *Matthews*, at the *Crown-Inn* in *Dunſtable*, who will pay you for them.

*Nov.* 7. 1743. *From your humble Servant.*

*The*

*The Author's Anſwer to the ſame.*

*SIR,*

ON the 9th Inſtant, I delivered ten *Kerroon* Cherry-Trees to Mr. *Matthews*, at the *Crown-Inn* at *Dunſtable*, and with them left a Letter to be ſent to you, giving an Account how I plant this Sort of Trees in Winter; but I think I omitted telling you, that, when theſe are planted, by leaving a Sort of a Baſon Form in the top Earth, you ought in *January* following to throw over all the Top of this Baſon Coal or Wood Soot to the Thickneſs of a Crown-Piece, and ſo once or twice every Year, and likewiſe on an adjacent Ground; for, by ſo doing, the Soot will give ſo great an Aſſiſtance to the Roots of theſe Trees, as to make them ſhoot more in one Year, than they would in ſeveral, if there was no more done to them, than what the Earth does they are planted in. Soot does alſo prevent the Harbour of Mice, and the Breed of Ants and other Inſects, which oftentimes either ſtunt the Growth of Trees, or kill them. The two largeſt Trees, in particular, I know will come to ſome Money for their Carriage, by reaſon of their great Weight; but, as they are well furniſhed with Roots, they will, if planted at firſt right in Virgin-Mould, and afterwards well looked to, return the ſecond Year ſome of the fineſt black Cherries, perhaps, in the whole World; a Cherry not only fit for the Table, but likewiſe for the Cellar; has a great deal of Fleſh in it, and that ſo firm, as to endure a long Carriage, when moſt others would ſpoil. Its delicious Juice is excellently pleaſant, when enjoyed directly from the Tree, and which Thouſands are Strangers to, who eat them at ſecond and third Hands; but its Wine is of ſuch a high, cordial, wholeſome Nature, that its nouriſhing, ſalubrious Qualities exceed thoſe of many other Sorts, when made

made in a true and artful Manner, an Art little known in the World; if it was known enough, there would not be ſo much Money expended as there every Year is in Foreign Clarets; for a Wine may be made from this great Black Cherry, that may nearly ſupply their Place, and give the Drinker great Satisfaction. I have been treated with this Wine at a Gentleman's Table, and at the ſame Time challenged to give it a right Name; for it was very difficult to know this from a *Barcelona* Wine, as he had made it; and, indeed, if this Wine, and a white and red Elder Wine, and white Currant Wine were made in their Perfection, and drank in common, inſtead of Foreign Wines, there would not ſo many die of Inflammations of Lungs, Gout, Gravel, and Stone, and other Maladies occaſioned by liberally drinking ſuch Foreign tartarous Wines and ſpirituous Liquors. Not that I recommend theſe *Engliſh* Wines, for their being clogged with a great deal of Sugar: I am ready to furniſh any Gentleman with the Cuttings of a peculiar white Elderberry Tree, that is of ſo ſweet a Nature of itſelf, as to want the leſs Aſſiſtance of Sugar; alſo with Cuttings of the white Currant-Buſh, or Tree, that is of an excellent Sort, as producing a very large and ſweet Fruit, capable of being made into a Wine little inferior to a ſmall *French* white Wine. If I had ſent a very ſmall Nurſery Cherry-tree, it muſt be ſome Years before an Owner can enjoy its Fruit; and therefore theſe large Trees are of the greater Value. I have likewiſe ſent a ſmall Parcel of Beech-Maſte, as a Preſent to his Lordſhip, which I fortunately had by me; for Mr. *Matthews* told me, my Lord wrote to him for ſome, but that he knew not where to get a Pint of this Seed for Money. But I ſhould think that a Thouſand of fine Beechen Sets of eighteen or twenty-four Inches long would alſo be very neceſſary to plant for the firſt Time, becauſe

becauſe theſe would arrive to a good Bigneſs ſome Years ſooner than the Maſte, and are of a much greater Certainty of Growth; and becauſe I could afford them at ten Shillings a Thouſand beſides the Carriage: And how valuable the Seed or Maſte of Beech is to Deer, Swine, Poultry, *&c.* they very well know that enjoy it in Plenty; which many do, who live in barren, chalky, ſandy, gravelly, and other poor Soils. I can likewiſe furniſh *May* Duke Standard, and ſeveral other Sorts of improved Cherry-trees, at one Shilling each, beſides Carriage to the Waggon or Ship; or Apples, Pears, and other Fruit-Trees; but, for the Orange-pear, I can ſend nothing of this Tree, but Grafts and Cyons; for I know of no ſuch Tree beſides my own in the World, that yields ſuch a large Golden Orange-coloured Fruit, that is always ripe in Harveſt, and is not leſs pleaſant, when eaten raw, than baked; for, when baked, it taſtes almoſt like a Sweetmeat, and for ſuch an early pleaſant Pear, to be enjoyed at this Time of the Year in a Pye or Paſty, is ſuch a Rarity to the Harveſtmen, that they exceedingly value it. I ſhould be very glad to be farther ſerviceable to his Lordſhip in any Thing that I can, as being,

*Sir, Your moſt obliged humble Servant to command,*

*Little-Gaddeſden,*
*Novemb.* 22, 1743. WILLIAM ELLIS.

I ſince received another Order from this Lord's Steward, for delivering 2000 Beechen Sets to Mr. *Matthews*, at *Dunſtable*, for his forwarding of them by the Waggon to the aforeſaid Earl; and I delivered them accordingly at ten Shillings a Thouſand, in *December* 1743.

The

*The Copy of a Letter from a Duke's Servant to this Author.*

*S I R,*

MY Lord Duke would be glad you would ſend as under by the —— Carrier, that will be at *Dunſtable* on *Tueſday* next in the Morning. Pleaſe to call on the Porter in —— *St. James's, London*, and he will pay you the Money, from

*S I R,*

*Your moſt humble Servant.*

*P. S.* The Waggon goes out but once a Week.

Black Kerroon Cherries } *one of each.*
Parſnip Apple-tree }
Slips of white Elder
Orange-tree Grafts
Lady-finger Graſs } *As much as can*
Tyne or Wild Fetch-graſs } *be had next Spring.*
Dumplin } *Grafts in the Seaſon.*
Gold Ruſſetin }

*The Author's Anſwer to the ſame, ſhewing the great Profit of ſowing Sprat-Barley, and the Uſe of the Maſte-Draught-plough.*

*S I R,*

I This Day delivered to Mr. *Tippet*, who keeps the *Half-Moon Inn* at *Dunſtable*, two Black Kerroon Cherry-trees, and likewiſe two Parſnip Apple-trees, with ſome Cuttings of white Elder, for the —— Carrier, to take up To-morrow. Theſe Cherry-trees are the ſame Sort, I lately ſent to *Dunſtable*, for forwarding them to the Earl of ——

which are ſo large, that his Grace will have Fruit on them in two Years Time, and the Pleaſure of eating a matchleſs Black Cherry. I likewiſe carried this Day two Thouſand Beechen Sets to the *Crown Inn* at *Dunſtable*, to be ſent to the aforeſaid Earl, that were moſt of them above two Feet in Length, well rooted, and juſt taken out of a poor clayey Soil, that qualifies them the better to grow and flouriſh in a drier one; and, if his Grace pleaſes, I will furniſh him with ſuch at a Shilling a Hundred, or eighteen Pence for larger, beſides Carriage, to *Dunſtable*. No Park, nor, indeed, incloſed Field, ſhould be without Beechen Trees in their Hedges, or planted on their Graſs Baulks, where the Soil will admit of their Growth, by Reaſon of the great Benefit their Maſte is of to Swine, Poultry, *&c.* And, as your Land conſiſts of Clays and Sands, the Maſte would be more than ordinary ſerviceable to Deer and Sheep, in preſerving them from the Rot; for the Oil, contained in the Beech-ſeed, is a ſingular Antidote againſt that and the Red-water. With us the Beech-tree thrives on a reddiſh Clay, as is apparent in thoſe that now are in *Aſtridge* Park, where the biggeſt Beech-trees now ſtand, I believe, that are to be ſeen in *England*: I can furniſh his Grace with white Wood Sets, for growing in wet, ſpewy Grounds, that are commonly at their Growth in fifty or ſixty Years Time; it is a whiter Wood than Deal, and therefore is preferred for making Shelves, Cupboards, Dreſſers, and other Houſhold Conveniencies, to the great Pleaſure of the good Houſewives, who delight to ſee theſe of the whiteſt Colour. If you have no Sprat-Barley, I can ſend you a Buſhel of this excellent Sort, by the Waggon, for increaſing it into large Quantities, and this from off either chalky, gravelly, or clayey Soils; for I, and my Neighbours, ſow it every Year, in various Sorts of Lands; if you have any Marſh Arable Land,

Land, or other very wet ſtrong Sort, this Barley will be a great Improver of it; for, by its ſtrong Straw, it will ſtand upright, when the common Barley will fall down, and ſpoil in ſuch rich Grounds. This is a Matter of great Conſequence, to thoſe who occupy ſuch Earths; becauſe, by this Means, they may become Maſters of ten Quarters of Barley on an Acre of ſuch Ground, when, perhaps, they would not have three Quarters from our common Barley; and, if this profitable Conveniency was more known, I am certain I ſhould have the more Cuſtom for it; but, at preſent, I am very ſenſible it is known to few, as well as Hundreds of other Things. I have been the more particular, in acquainting you with this Barley-ſeed, becauſe you lie on the Edge of a very wet Part of the Country, that contains vaſt Numbers of Acres of Marſh and wet ſtrong Earths, which would, if managed right, produce great Quantities of this Grain; and, for this Purpoſe, the Two-wheel, light, Draught-plough is made ſo ſtrong and clever, that it is the chief Plough made Uſe of in a certain County, for plowing their Marſh Grounds, preparatory for ſowing them with Corn; and not only Marſh Grounds, but I have ſeen ſpecial good Work performed by one of theſe in 1743, in fallowing up a very hard gravelly Soil, which it did, I thought, in an extraordinary Manner. This Plough, if you, or any of your Acquaintance, has Occaſion for, I can ſend one to him that ſhall be made in the greateſt Perfection, as being a moſt ſerviceable Inſtrument, not only for doing what I have been juſt mentioning, but likewiſe for performing ſeveral other valuable Works in the Plowing-part of Huſbandry. I am,

*Little Gaddeſden,*
13 *December*, 1743.

*Sir, Your humble Servant to command,*
W. Ellis.

*The Copy of a Letter for ſending a Gentleman* Ayleſ-bury *pirky Wheat-ſeed.*

*S I R,*

PRAY ſend me, by the Return of the Waggoner, a Quarter of your *Ayleſbury* pirky Wheat for a Trial of it; and, upon the Delivery of it, I will pay him for it, you ſending, by him, an Account what it comes to.

At your Leiſure, pleaſe alſo to ſend me ſuch Sort of Plough as you reckon beſt for a dry, loamy Soil, which ſhall be properly acknowledged by, Sir,

*Your very humble Servant.*

Direct to ——— Eſq;
at ——— *London.*
8th *November*, 1743.

*The Author's Anſwer to the ſame, ſhewing the Management of improving* Ayleſbury *pirky Wheat-ſeed.*

*S I R,*

ACcording to your Order I have ſent you *Ayleſbury* pirky Wheat-ſeed, that was brought up from the lower Parts of *Buckinghamſhire* two Years ago, and ſince ſown in the chalky Grounds of *Pitſtone* Pariſh, that lie a few Miles diſtant from my Houſe, which gives this Seed an improving Quality by the following Means: In the lower Part of *Buckinghamſhire*, there are Men who make it their Buſineſs to plow up Meadow Ground, (which was at firſt laid down for this Purpoſe) and ſow a clean pirky Wheat-ſeed in the ſame for a firſt Crop; by which they have a Return of a clean, plump, pure-bodied Wheat, free of Weeds, and all Manner of Soil, and larger than ordinary,

as

as it comes off a rich, ſtiff, blackiſh Earth. Now this maiden Crop, coming off new, broken-up freſh Ground, is ſaved on Purpoſe for Sale-ſeed; and accordingly is bought up by particular Men, who make it their Buſineſs to collect and buy it in large Quantities, for ſelling it again, to many Farmers in ſmall Parcels, for their ſowing it in various Soils in other Parts of the Country: Among which Number, ſeveral of my Acquaintance, who are Occupiers of chalky Grounds, punctually obſerve to buy this Seed every third Year, becauſe they ſow it no more than two Years before they get freſh again, in order to fit it the better for Sowing in contrary Earths; for no Change exceeds the Sowing of Wheat-ſeed from off a chalky Ground, on a ſtiff, loamy, or clayey Ground; and it is for this very Reaſon that great Quantities are every Year ſent from our Parts into the *Northern* Parts of *England*. I ſhall endeavour to furniſh you with a proper Plough that will beſt ſuit the Soil you have given me an Account of, who am,

*Sir, Yours*, &c.

*Little Gaddeſden, 10th November*, 1743.

*Remarks on this Gentleman's Letter for furniſhing him with* Ayleſbury *pirky Wheat-ſeed.*—This Gentleman has diſcovered himſelf to be Maſter of a more neceſſary and brighter Curioſity than any other, (except one) I have yet met with, in ſending to me for furniſhing him with a Quantity of this delicate Wheat-ſeed, that is to be ſent to his Eſtate for propagating its Species in a Part of the Country where it never was before. This is ſtriking at the Root of a moſt valuable Improvement, for it is not only to plow and dung Land, and fit it in the beſt manner for the Reception of Wheat-ſeed:

There

There is likewiſe a neceſſary Proviſion to be made in getting ready a right Sort, that will beſt ſuit the particular Time of Year of ſowing, the Nature of the Soil, and its Situation. I will only mention one Caſe on this Account:—As a *Chilturn* Farmer cannot well pay his Rent without Crops of Turneps or Rapes, ſome, if not all his Turneps, or Rapes, cannot be eaten off time enough for ſowing the ſame Land with a *Lammas* Wheat, becauſe this Wheat growing on a long ſtrong Straw, and in a long Ear, where its Kernels ſtand the furtheſt a-part of all other Wheats, requires an early Sowing to ripen it in due Time; therefore after *October* we account it rather too late to ſow this Sort, leſt the Farmer loſe great Part of the Crop by it, becauſe, by ſuch late ſowing of this *Lammas* Wheat, it will, very probably, be too late in its green Ear, and thereby be the more expoſed to the Damage of Honey-Dews and Blights, for this Wheat, more than any other, is leaſt capable to reſiſt this Sort of Prejudices. On this Account, we have Recourſe to the great Conveniency of ſowing pirky Wheat, by reaſon this has a ſhorter Straw, and cloſer Ear; is a hardier Sort than the *Lammas*, for, by its low, ſlender Straw, and bunchy Ear, it is the better able to reſiſt Honey-Dews and Blights. Again, as Turneps are generally ſown on a gravelly, a chalky, ſandy, or dry Loam, and eaten off by Sheep, or Bullocks, the *Lammas* Wheat will not agree with ſuch dry, lean Earth, near ſo well as a pirky Sort; for a Loam beſt affects a rich, ſtiff Soil, to maintain its long thick Straw, and lank Ear, when a pirky Wheat will flouriſh on a leaner, and dry one, which makes it of great Value to follow a Crop of Turneps; and on this Account it is, that all over *Hertfordſhire* its Farmers make Uſe of hardly any other Sort to ſow after theſe Roots, and this very late in the Year; for I have

ſown

ſown it in the Beginning of *March* upon Neceſſity, and, as it happened, I had a good Crop, late in Harveſt: Not but I frankly acknowledge, that ſuch late Sowing was not good Huſbandry, becauſe it laid me under a greater Riſque than I willingly would have run; but, as I wanted to make up a certain Number of Acres of Wheat that Year, I ventured it. However, I have this farther to add, That, in *November*, *December*, *January*, and *February*, this pirky Wheat is often ſown after Turneps, and Cole or Rape Crops, and generally hits well, though not quite ſo certain as that more forward ſown. In ſhort, no Gentleman or Farmer, who ſows his Land with Turneps, or Rapes, ſhould be without this Sort of Wheat, for ſowing it to follow them. I likewiſe have further Occaſion to obſerve, that thoſe Gentlemen and Farmers, whoſe Lands lie more to the *Northward* than our County of *Hertford* does, are, in an eſpecial Manner, obliged to ſow this pirky Wheat in their Tilth Earth, in *September* or *October*, in their wettiſh, ſtiffiſh, Ridge, open-field Lands, and later in their drier Soils, after Turneps, or Rapes, for this hardy Wheat agrees as well with a ſtiff Earth as a dry Earth. But then here is this Caution to be, in a particular Manner, regarded: A Perſon may ſow pirky Wheat to little Purpoſe, if he does not take particular Care to have a right Sort of it; for, let me aſſure them, there is a great Difference in pirky Wheat-ſeed. Some is Rubbiſh in Compariſon of others. Some may be attended with the ſmutty, ruinous Quality; others with Pepper-Wheat; others with Darnel, and ſmaller Seeds of Weeds; others with underline Corns, and others from growing in an improper Soil, for ſowing it in another it is wanted for. Theſe malignant Incidents ought to be moſt carefully avoided, if a Perſon

Perſon intends to ſucceed in ſowing this beneficial Wheat-ſeed; and therefore a few Shillings extraordinary are far from being flung away, for enjoying a true, pure Sort of clean pirky Seed. On the contrary, it is ſome of the worſt Money kept back of all others, that ſhould be expended in the Management of a Farm; becauſe, as a Perſon's Seed is, ſo will his Crop be, and ſo will his Profits ariſe. This leads me to obſerve, That, on the 25th Day of *December* laſt, 1743, I received a Letter from Colonel *Willis*, one of the chief Planters in *Virginia*, for ſending him over four Sacks of four ſeveral Sorts of Wheat-ſeeds, for ſowing them in his various Soils, with Orders to get them at any Price I ſhall think fit to give. This diſcovers a great Genius in this Gentleman, who, by this his extenſive Commiſſion to me, ſhews he is ſenſible, that the beſt Wheat-ſeed is the cheapeſt of all others, though it coſts more than the common Sort ſold in Markets; and, that a Wheat-ſeed may anſwer this Character, it muſt be a bold, full-bodied Sort, and a clean, dry Sort, free of all Soil from Seeds of Weeds; that which has been lately thraſhed out, and that comes off a right Soil for ſowing it in another. This Gentleman, though a perfect Stranger to me (for I am only known to him by my Books, which, he ſays, have given him ſo great a Pleaſure, that he has thus ſent to me for theſe Wheats) may juſtly upbraid the Indolence of many of our *Engliſh* Occupiers of Arable Lands, who, notwithſtanding they poſſeſs various Soils in their Eſtates and Farms, yet are not prudent enough to furniſh themſelves, like this Foreigner, with Wheat-ſeeds proper for them, and therefore are incapacitated for enjoying thoſe Profits which otherwiſe they might do, by ſelling their Corn at Home, and at foreign Markets, for the greater Prices; as this Gentleman will be ſure to do, who has informed

formed me, by his Letter, how he improves his Land, by planting Tobacco, and ſowing Wheat.

## CHAP. XIII.

### *Of* Rolling Corn.

THE *Benefit of Rolling Corn in* April. —This is an ancient *Virgilian* Piece of Huſbandry, moſt neceſſary to be performed in this Month, both on Vale and *Chilturn* Corn-grounds, whether they be Barley, Peaſe, or Beans, *&c.* for the ſeveral Reaſons following. *Firſt*, to ſecure them from the deſtructive Slug. *Secondly*, to prevent the Damage of long and violent Droughts. *Thirdly*, to nouriſh the Corn-Roots; and *Fourthly*, to make them ſtand faſt. *Firſt*, to ſecure a Crop of Corn from the Slug. The Slug, or naked Snail, though a ſmall Inſect, is the moſt miſchievous of all others to Corn-crops, eſpecially to that of Peaſe; for theſe are the moſt natural and moſt delicious Food of all the Field Kind to them, and therefore they remain feeding on them longer than any other, for the Slug attacks the Peaſe from their infant Growth till they are in Pod; and on this Account it is that a Farmer, in the random Way of ſowing Peaſe, cannot be ſure of a full Crop of them, till they are paſt the Slug's Power to hurt them; which keeps many Farmers under a panic Apprehenſion of the Loſs of their Pea-Crops, or ſome Part of them, by this ravenous Inſect; for the Rapine of this ſmall Creature is committed chiefly in wet, warm Weather, that frequently happens in this Month of *April*, which aſſiſts the Slug not only in its vigorous Feeding, but likewiſe in its Breeding, by laying its ſmall Eggs in little Cells, under Clots of Earth; and when the Weather is thus favourable to the

Breed of this ſlimy Inſect, their Increaſe in a ſmall Field is infinite, and endures Years together, if the Seaſons are mild: That is to ſay, if a wet, warm Summer and a mild Winter ſucceed each other, then the Slug remains in Safety, and keeps his Poſſeſſion till the next Spring Time, when he is ready for renewing his wonted Rapine. But, in caſe a very hard Winter happens, then the Farmer ſtands a hopeful Chance of being delivered from thoſe his arch Enemies, who, although they lie too deep for being deſtroyed by the Tines of common Harrows, yet a ſevere and long Froſt will ſometimes penetrate into their Beds, or Cells, and there deſtroy both them and their Eggs, as it happened to them in the Winter 1739, and in the Spring 1740, which was ſuch a hard and long Froſt, that it rived, or ſplit, many Oaken Trees, or rather burſted them, by ſwelling their Sap into an icy Subſtance, and, at the ſame time, entered the Earth ſo deep as to kill moſt of the Snail or Slug Tribe, common Worms, Darrs, and Canker-worms, inſomuch that our Crops of Corn have hardly ſuffered by them to this Day. But when theſe Inſects live in great Numbers, in Weather ſuitable to their Nature, they become the greateſt Field Peſt of all living Creatures, by annoying, and ſometimes ruining Corn, Turneps, artificial Graſſes, and other Vegetables, both in Gardens and Fields; and what very much chagrines the Farmer is, that he cannot deſtroy them with all the Art he is Maſter of. Lime, indeed, will do a great deal towards it, but it will not fully anſwer his Purpoſe; for, if To-day he ſows his Lime over a young Crop of Peaſe, Turneps, *&c.* perhaps the ſame Night, or next Day, great Part of its Efficacy may be loſt by the Fall of great Rains: Or, if a Courſe of dry Weather ſhould ſucceed, then very likely the Lime will ſerve to burn up the infant ſprouting Grain, as young

young Turneps, Clover, Flax, Wold, Peaſe, and other green tender Vegetables: And if he ſows Soot inſtead of Lime, or Tobacco-duſt over them, he may chance to ſhare the ſame Fate; and ſo of any other hot powdered Manure. Wherefore, to prevent theſe deſtructive Miſchiefs, as well as the Farmer can, he makes Uſe of the common wooden Roll, eight Feet long, fixed in a Frame, and drawn by one or more Horſes: The hindmoſt being faſtened in a pair of wooden Shafts, for the more ſteady drawing, and turning it at the Land's End, and bringing it through narrow Gate-ways, that lead from one Field to another. Here we roll the Corn that lies in Broad-lands, and in Ridges, commonly twice in a Place, to cruſh down and kill the Slug; and, for doing this Work the more effectually, a good Huſbandman will begin to roll his Ground at Peep of Day, for drawing the Roll along the Lands, while theſe Inſects are in their high Feeding; for, if he defers this Work later in the Morning, the Slug (eſpecially if the Weather is dry) will quit the Surface, and creep into the lower Earth for ſheltering themſelves, and lying ſafe from Accidents. This Caution, therefore, ought to be well regarded by all concerned in rolling of Corn-crops, for one Hour's Time, in the Fore-part of the Morning, is better than three afterwards, for killing Slugs, by the Preſſure of the heavy wooden Roll. *Secondly*, the Roll ought to be made Uſe of to prevent the Damage of long Droughts, which may prove fatal to Crops of Corn, by drying and parching their Roots, while they are in their Infancy; becauſe then the Sun and Air have free Acceſs to them, and, being in their thready Condition of Growth, the Heats may very eaſily enter, dry the Earth about them, and do that Miſchief, which, perhaps, can never be recovered. Now, to prevent this, a good

Farmer, in due Time, will roll his Horſe-beans, his Thetches, his Peaſe, his Barley, or other Crops, that generally want Rolling in this Month, by cruſhing down, and laying even, the clotty Earth on the Surface; which, though it did ſome Good before, by breaking off the Guſts of cold Winds from the Corn-roots, yet now becomes neceſſary to break them down, by the Preſſure of the Roll, for laying the Surface level, for the Operation of the Scithe hereafter, and for ſhading and ſheltering them from the Power of long and dry hot Seaſons. *Thirdly*, by cruſhing down the clotty Part of the Surface with this wooden Roll, and laying it even, the Corn-roots receive a Sort of ſecond Dreſſing; for, when the Earth is thus ſqueeſed about them, the Rains will waſh out its ſaline Quality on them, nouriſh them all the Summer after, and by this Means aſſiſt a ſcanty Manure, that was laid over the Crop at Sowing-time, and further increaſe the fertile Effects of a rich one; as is obvious to all Farmers, who practiſe the good Huſbandry of uſing the Roll in this Manner; and more eſpecially ſo, if a dripping Summer ſucceeds this profitable Work, for then we ſeldom fail, by this Means, to ſee our Crops grow and flouriſh in large Stalks, Pods, and Ears, that give us the greateſt Hopes of enjoying a plentiful Harveſt. The contrary Effects of this Management are eaſily perceived, when it ſo happens, that a Farmer is put by his Intention of rolling his Corn in due Time, as it now and then happens to be his Caſe, by the Fall of heavy and long Rains, that hinder his doing this Work; for, if he was to roll his Corn in ſuch Weather, the Horſes Feet would be apt to ſtolch, cruſh down, and bruiſe, or bury many of the Corn-ſtalks, or Blades, to the utter Spoiling of ſome of them; therefore it muſt be dry Weather, whenever this Work is performed. But, if this Happineſs is not

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to be enjoyed before the Stalk and Blade are got too old for the Purpoſe, then the Rolling-part had far better be let alone, and the Farmer remain content to ſee the Want of that he cannot have; which, very probably, will cauſe him the Sight of a languiſhing Crop of Corn. *Fourthly* and *Laſtly*, by rolling Corn, the clotty ſurface Earth is ſo faſtened on, and about its Roots, as to enable the Stalks to ſtand erect, for receiving the benign Benefits of the Sun, Air, and Rain, in Perfection; for, when they grow in this Poſture, the Sun and Air have a free Paſſage between their many upright Stalks, that thus ſerve to ripen them with the greater Expedition, becauſe the aerial, warm Influences have Room to harden them, and cauſe the Stalks and Ears to perform their regular and ſafe Bloſſoming, and Blooming, without which there can no right, full Crops of Corn be reaſonably expected; for, when the Stalks of Corn are, by heavy Rains, ſtrong Winds, and for Want of rolling the Ground, forced to fall down, ſuch Crops cannot enjoy a right Bloſſoming, or Blooming; and then, I am ſure, they cannot be well corned. Again, there is this Caution alſo to be obſerved in the Rolling of Corn; where Barley, or other Grain, has not been rolled before Spindling-time, it ſhould, by no Means, be rolled then; for, if this was to be done, it may, perhaps, bring on the Loſs of almoſt a whole Crop of Corn, becauſe, if its Stalks are got ſo ſtrong as to grow upright in a tolerable Heighth, and the Roller be then drawn over them, it will conſequently ſqueeſe them to that Degree as to make them *bleed*, as we call it; that is, it will bruiſe them ſo as to force out Part of their Sap; and then, as the green Stalks loſe that vital Part which ſhould nouriſh and carry on their Growth, they muſt be ſtunted, if not killed. And although one would think, this Caſe needs no Advice to caution againſt it,, yet I have

have known ſome topping Farmers commit this egregious Miſtake, to their great Damage, without perceiving their Folly, till it was too late, and ſome not at all; for, being ignorant of the Damage that ſuch late Rolling may cauſe, when they ſee a Barley-crop ſtunted, they are apt to impute it to a wrong Cauſe, and not to the right one, of the late Rolling of their Corn in its ſpindling Condition. I knew a Yeoman, who was Owner of a Hundred a Year, a fine Farmer, that was brought up to Huſbandry Buſineſs all his Life, be guilty of this very Miſtake; who went on, committing it Year after Year, till at laſt he had ſo much Damage done, by rolling his Barley at an unſeaſonable Growth, as opened his Eyes, cauſed him to perceive his Error, and become his own Monitor, as well as to other Farmers; for he frankly owned he acted wrong in rolling his Barley (in particular) too late, even when it had arrived to its ſpindling Condition; but, for a more exact Account of rolling Arable Grounds, ſee my Book, intituled, *New Experiments in Huſbandry* (at Page 16) wherein you may find ſeveral Matters I have not here mentioned. As to the Rolling of Graſs, or Meadow Grounds, I have wrote on it in laſt Month, and therefore ſhall omit it here.

CHAP.

## CHAP. XIV.

### *Of Hedging.*

*Of Plaiſhing Hedges in* April. — Although this Month of *April* is the laſt Month in the Spring Seaſon, that admits of Plaiſhing Hedges, yet no prudent Farmer will have this Work to do now, unleſs mere Neceſſity forces him to it. Neceſſity, it is true, may happen upon two Accounts: One, by long Froſts, Snows, and Rains; the other, by Multiplicity of Buſineſs, and Scarcity of Hands. All, or Part of theſe Reaſons, may be the Cauſe that he is forced to cut and plaiſh Hedges in *April*, if the warm Weather has not rarefied the Sap of the Wood, to the Degree of what we in *Hertfordſhire* call *Boxing*; that is, if the Rind is not liquefied ſo much, by the Sap, as to part from the Wood, on bending down a Plaiſh. If it is, this Work (let the Occaſion be ever ſo preſſing) muſt be let alone; becauſe, if it is performed at ſuch a Time, it would ſurely kill ſo much of the Hedge, as where the Cuts or Plaiſhes are made. But, where this Work can be ſecurely done, it is of the greateſt Importance to a Farmer; becauſe this Piece of neceſſary Huſbandry is the Foundation of many Advantages to him. It is by a good Hedge that he has not only Fuel for his own Uſe, but alſo, for ſelling ſome to others. By a good Hedge he can keep his Corn, his Graſs, his Turneps, his Rapes, and other Vegetables, from the Rapine of ill Neighbours, in a much ſecurer Manner than thoſe Farmers can, who ſow theſe in common, open Fields; not that a *Chilturn* Farmer can ſay, I will loſe none of them: No, there is none can ſay this, becauſe the common Sort of Hedges is not capable of preventing the arch Thief; but a Hedge that is half Thorn, and plaiſhed, and made

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to grow very thick, and to a good Heighth, may intimidate the leſſer, younger Thieves, and Women, from attempting to ſteal the Farmer's Corn, and other of his Field Ware, for fear the Difficulty of going backward and forward, over his Hedges, ſhould betray them; which ſometimes happens, by the crackling Noiſe of the Wood, or by a Perſon's lying as a Spy, in Ambuſh, by the Cover of another Part of the Hedge. An old Farmer of my Acquaintance ſowed a four Acre Field with Turnep-ſeed in 1743, which taking all over the Land very well, he beſtowed due Houghing upon them, and they proved a fine Crop. Now this incloſed Field, though it lay but about a Hundred and Twenty Poles off his Dwelling-houſe, yet, I heard him ſay, he did not expect to enjoy the Benefit of above two Thirds of the Crop, becauſe a Path-way lay through this Field, which gave the Pilferer a very great Opportunity to carry off his Plunder; however, as it happened, he got three and twenty Shillings for every Acre of theſe Turneps, after they had been heartily thinned by Mr. Thief, by ſelling them to a Butcher, that fed them off with his fatting Sheep. This ſhews how neceſſary a good Fence is at all Times, to be kept up; for, at beſt, few Farmers are free from more or leſs of their Rapine; eſpecially thoſe who are either lame or decrepid by old Age, or live at a great Diſtance from their Out-fields. Cattle are likewiſe reſtrained from getting out of an incloſed Field, where the Hedges of it are in good Order, as well as others, from getting into it. It is by this great and ſtrong Barrier of a good Hedge, that Night-rogues are prevented turning in a Cow, Horſe, or Sheep, into a Field, for filling their Bellies at the Farmer's Coſt; which I have known done by a petty Dealer, or Higler, who, keeping a ſcrub Horſe, for carrying Fiſh about the Country, would turn him, by one Means or other, into a Field, late

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at Night, and fetch him out early in a Morning, before any of the hard-working Farmer's Servants were up. By a ſtrong Fence, the great Damage of paying Coſt for what any ſtray Cattle may occaſion, by their breaking into a Neighbour's Field of Corn, is avoided, and the Farmer made to enjoy his Sleep with the greater Aſſurance, when his Field is ſurrounded by an able, well-made Hedge, and Ditch. In 1742, I had a Hedge made, and a Ditch, three Feet wide, in all, from the live Stake, ſcowered ſo deeply up, as to raiſe the Earth on the other Side eighteen Inches higher than the common Surface of the Ground; and though this was almoſt a haſel Hedge, yet, by the Help of ſuch a deep-ſcowered Ditch, and laying down the Plaiſhes thicker than ordinary, the Hunters, Shooters, and Poachers, have not ſince been able to preſs it ſo much as to give any Cattle of my own, or Neighbours, Room to go out, or into it, by any Gap; whereas heretofore, when the ſame Hedge has been made, and the Ditch ſcowered up, by a bad Workman, there has been conſiderable Damage done by my Neighbours Cattle breaking into my Field, and mine into theirs. This is enough to ſhew the Value of an ingenious Workman, or Hedger, whoſe Perfections, were I here to deſcribe, would take me up more Paper than at this Time I am willing to employ, and therefore ſhall poſtpone his Character to another Opportunity; in the mean Time, I have this to acquaint all Gentlemen with, who are Owners of incloſed Lands, or that may be incloſed, that the Country I live in is juſtly famed for the beſt of Workmen-hedgers, who are ſo valuable to Farmers, who occupy incloſed Fields, that ſuch a one better deſerves ſix Pence, where a bad Workman does three Pence; becauſe, whether it be well, or ill made, it requires to lie nine Years, at leaſt, before it can be made again; and, if it is not well made at firſt, it

expoſes the Farmer to a great deal of Damage that may happen in that Time. If Hundreds of Gentlemen, therefore, did but know, how profitable ſuch a good Workman would be to them, I am perſuaded, I ſhould have Letters in great Numbers ſent me to help them to ſuch, though they gave extraordinary Wages for him. But, if I miſtake not, the main Reaſon, why many Gentlemen do not ſeek out for ſuch a good Workman-hedger, is, becauſe they have not a true Notion of the right Method of planting and plaiſhing Hedges; this I am the more ſanguine to believe, from what I myſelf have heard in ſeveral Parts where I have travelled. They have thought their Workmen made and plaiſhed Hedges in ample Order, when, I think I may ſay, they were of the worſt Sort. Therefore it behoves Perſons either to believe my Deſcription of a good Hedge, or better to travel, and ſee thoſe that are made, which exceed their own; and theſe, I preſume, I may ſay, are to be viewed in *Hertfordſhire*, where ſeveral Sorts of them may be ſeen in the greateſt Perfection. The Alder, the Willow, the Sallow, the white Wood, the Poplar, and the Withy, in moory, or watery Grounds; the Silver Beech, the Horn Beech, the Maple, the Haſle, the Witch-Elm, the Aſh, the Oak, and the black and white Thorns, with ſeveral other Sorts, in drier Soils, where they grow in great Variety of Beauty and Profit. And therefore, if any Gentleman pleaſes to ſend to me for a Servant, that is capable of performing this excellent Work, let him not grudge to give him ſome extraordinary Encouragement, becauſe a good Hedger may lay a Foundation, at his firſt planting a Hedge in right Order, for producing a vaſt Profit afterwards, even, perhaps, for Hundreds of Years to come; for a Hedge well planted at firſt, and well managed afterwards, may be prevented from ever being deſtroyed by Age; becauſe there is a Way to be practiſed by a Man

a Man of Judgment, to renew an old one in ſuch a Manner, that no Time need be loſt in ſuch its Renewal. Hence I am obliged to give Notice, that if any Perſon ſends to me for a Servant that can hedge, as well as do other Work, in the Farming Buſineſs, he ought to ſend me a particular Account of the Nature of his Soil, and the Situation it lies in, that I may know the better how to make Choice of, and ſend him one that underſtands that Sort of Hedging proper and ſuitable to his Land; for there are moory or marſh Land Hedgers, Vale-hedgers, and *Chilturn* Hedgers: That is, there are ſome, who are ſo much uſed to work on their particular Sort of Hedges, that they can do no other rightly. For Example: A Vale-hedger is uſed to renew, or make his Hedges in the Way, they here call *Backing* it; which is ſo much contrary to the Mode a *Chilturn* Hedge is made in, that he is a perfect Stranger to it. Again, a *Chilturn* Hedger is ſo much uſed to laying down his Hedge by Plaiſhes, that he is as great a Stranger to the Vale-mode. And, for the marſh or moory Land Hedger, he is better acquainted with planting, and cutting up, or plaiſhing an Alder, a Withy, a Willow, or other Water-wood Hedge, than either of the other two. But, to come nearer the Matter, I muſt further obſerve, that it is not only Planting or Plaiſhing any of theſe Hedges, there is another main Article ſtill behind; and that is, how to cut the proper Wood out, and, afterwards, how to make the moſt of it to the Owner's greateſt Advantage.

## CHAP. XIV.

### *Of the* Gypſy-Vagrant.

*A Further Account of the Damage that the Gypſy-Vagrant does to the Farmer and Country in general.*— It may, perhaps, be thought by ſome Perſons, that I here buſy my Pen in writing on too mean a Subject, when I write of the Gypſy-Vagrant, in Neglect of others of greater Importance: But, were they to live in the County of *Hertford*, where I do, or in any of the Counties frequented by theſe Cheats, I dare believe they would be of another Mind, and think it a moſt neceſſary Article; which I chiefly write on to apprize our Legiſlators of the horrid Damage that the Farmers and Country, in general, ſuſtain by theſe arch Thieves travelling up and down it, as it were, in Maſquerade; becauſe their Men appear only in the Night-time, unleſs it be in their Journeying: And, tho' their Women do it in the Day, yet it is under the Diſguiſe of their being only a Company of poor Women and Children, that beg to live on the Charity of good People; and that they may get the nearer Acceſs to the Perſons of both Maſter, Miſtreſs, and Servants, they wrap themſelves up in cold Weather, in a Blanket, and at the Door beg in a moſt ardent Manner; and, if this is not like to ſucceed, they alter their Language, and fall to telling a little that is to happen *in futuro*, or Time to come; but, if they will give them a Bit of Money, they will tell them the Whole of what good Fortune is to befall them, with a deal of bombaſt Stuff, that they are not at a Loſs to expreſs. But let ſuch know, that it is not in the Power of any wicked Perſon, to give an Account of any Thing that ſhall certainly come to paſs; no, this is not in the Pow-

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er of the Devils themſelves, as the learned Author of the Book of Apparitions well obſerves; but is altogether confined to the Knowledge of the Almighty God, the Creator of all Things, and ſupreme Governor of all Events, bleſſed be his Name for ever and ever. *Amen.*

*Of the Gypſy Cant, whereby they can talk on the Spot to their Comrades, for deceiving honeſt Perſons, with the greater Subtlety.* — This they do oftenest, when they are in Company with honeſt People, for a more knowing one to give his timely Advice to a more ignorant one; or to give Notice of a favourable Opportunity to ſteal, or deceive, *&c.* They partly for theſe Purpoſes make Uſe of an *Iriſh* or an *Engliſh* Cant. — A Houſe, they call a *Ken*; an Old Woman, *a Moat*; a Young one, *a Bloſs*; an Old Man, *a Cove*; a Juſtice, *a Rumbeak*; a Dog, *a Buffer*; Barn, a *Skipper*; a Bed, *a Pad*; Sheets, *a Slade*; Liquor, *Booze*; Milk, *Yearm*; Beans, *Black Jack*; Peaſe, *Trundlers*; Turneps, *Nips*; Door, *a Jigges*; *Wheeze the Moate, and ſhe will tip the Lour*; as much as to ſay, *Beg clean, and you will get ſome Money*; and a thouſand other Terms, invented to deceive, when they are in Company with honeſt People, that they may the more cleverly impoſe on them.

*A further Account of the Actions of theſe wicked Gypſy Vagrants.* — Theſe Gypſies ought, by no Means, to be ſuffered to travel about the Country, nor Town, becauſe they are not only a Nuſance to to the Farmer, but likewiſe to the Shop-keeper, as may appear by what follows: Both the Men and Women Gypſies confine not their villanous Actions to the Farmer alone; they extend them to all Places where they can find an Opportunity. As they have one, two, or more Horſes, or Mules, or Aſſes, commonly with them, they ſerve their Turn to bite the honeſt, ignorant Shop-keeper, eſpecially

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ſome in Country Towns: They go into a Shop and cheapen ſeveral Sorts of Goods, telling the ignorant Maſter or Man, or his Maid-Servant, that they deal in ſelling of Linnen, Woollen, Ribbons, Garters, and other Sorts, and have a Licenſe for ſo doing; and I have been told, that one in their Gang has had a true one that they take out for the Purpoſe, in order to cloak their Villany with the more Artifice; for by this Means they pilfer ſome, while they are buying others, as being moſt of them Maſters of Sleight of Hand; and, for their greater Safety from being apprehended, they are always at Home, as making a Habitation under a Hedge, or in a Wood, *&c.* when it does not ſuit their Conveniency to houſe; where they hold Councils for executing their black Deſigns, and are ſo readily ſupplied with Proviſions, that their trained Dogs will ſeize and carry off the Booty of live Geeſe, Ducks, Hens, Chickens, Turkies, *&c.* without ſuffering them to make a Noiſe; as their Maſters will in the Night-time, when they rob Hen-rooſts, by putting up a Stick to the Hen's Belly; and, by a little Puſh of it, the Poultry will deſcend on the Top of it, without the leaſt Cry; as I had the Relation of theſe and other Facts from a Woman that begged at my Door, who told me, ſhe travelled with ſome of them to ſee firſt if ſhe approved of their Society (a good one I will warrant you) but forſook their Company in Diſlike. She told me, theſe Gypſies ſeldom ever marry, but live almoſt promiſcuouſly; if a Man do not like his Female Partner, he gives her ill Words, or a Kick, and takes another. On the 6th Day of *June*, 1743, a Gypſy Fellow aſked my Farrier the Way to *Aylesbury*, and he told him; but, in a few Hours after, he ſaw the ſame Fellow, at leſs than two Miles Diſtance (for *Aylesbury* was nine Miles) fiddling to ſome Gypſy Women in a Barn at *Abbery*, and aſked him why he aſked the Way to *Aylesbury*,

*Aylesbury*, and knew it as well as I. This he denied not, for his Question was made to amuse People, that they should have the less Knowledge of their Rendezvous. There was a Gang of these Gypsies met about the 18th of *January*, 1742, consisting of five Men, besides many Women and Children, going into a large Wood of Beechen Trees, near *High Wickham*, in *Bucks*; a Place that suits their Purpose best, and where they pitch their Canopy they lodge and keep Fire. These had two Mules, and two Asses, with them. By all which Conveniences, they have the Opportunity of stealing Sheep, Lambs, and Poultry; and having got Wood enough, and Privacy to their Desire, in the Night-time they dress it in such Cover, and enjoy themselves on the Spoil of the Country, most commonly in a Dell-hole, or Chalk-pit, till, in a few Days, they remove their Quarters; for their Business is not to stay a longer Time in a Place, than it agrees with their Safety. This Woman told me, they live almost three Parts of the Year in *Kent*, *Surry*, *Sussex*, *Hampshire*, *Berkshire*, *Buckinghamshire*, and *Hertfordshire*, but commonly leave *Kent* a little while after Hopping-time; for, if they travel and beg there, the People generally throw it in their Teeth — *Where is your Hop-Money, live on that* — This Woman told me, she has not seen such a numerous Gang of Gypsies a long Time; for these, she says, were nineteen in all. There was a Crew of them of about sixteen at *Charing*, in *Kent*, that lay ready for the Hopping-Season; but it happened that most of them fell sick of a Fever, and some of the Small-Pox, and few died; for there was an old sage Veteran in their Company, who sold her Gold Rings, and raised all the Money she could to defray their Charge, and keep them off the Parish; for they take all possible Care, to prevent that, lest it bring them under such an Odium, as would soon spread the

the Country, and prevent their future Travelling: She farther ſaid, that, had ſhe become one of their Society, ſhe muſt take an Oath to be true to them; and that if ſhe had ſo done, and proved falſe, in betraying or forſaking them, they would contrive ſome ſly Way, or other, to be her Ruin. There were many of them taken up, and proſecuted, for Villanies at *Salisbury*. *Northwood*, near *Dulwich*, uſed to be a great Reſort for theſe peſtiferous Vagrants. They ſeldom go in *London*, unleſs great Neceſſity force them to it; which made one late venture to go into a Shop, and ſteal ſome Ribbons; but ſhe was heartily flogged for it in *Tothill-Bridewell*, *Weſtminſter*. She ſays, that the *Boſwell*'s, the *Draper*'s, and the *Hilton*'s Gangs are much leſſened and decayed of late, by Hanging and Tranſportations; for it is theſe ubiquitarian counterfeit *Egyptians*, that have great Opportunities to ſteal Horſes, and other Things; becauſe they are always upon the Tramp, as the Chief of them did, who was lately hanged at *Aylesbury* for Horſe-ſtealing; and, I hope, if the Vagrant Law is amended, that it may be made more ſevere than ever, againſt this Sort of cheating, thieving Vagabonds in Particular; who, under the Cloak of aſking Charity, commit Thouſands of Robberies, as being a moſt ſubtle, intriguing, wicked Crew.

CHAP.

## CHAP. XV.

### *The Copy of a Letter for furniſhing a Gentleman with Beechen and Witch Elm-Sets.*

*SIR,* *January* 23, 1743.

OBſerving in your laſt Monthly Book for *February*, that you have good Beech-ſets to diſpoſe of at one Shilling and Six-pence *per* Hundred, I deſire you would ſend me five Hundred of them, and alſo five Hundred Witch-Elm Sets by the — Waggon, which every *Tueſday* and *Friday* Morning calls at the following Places near you, *viz.* at the *Crow*, kept by *Jeffry Dudley*, at *St. Alban*'s, at Seven o'Clock; at the *Bell* in *Market-ſtreet*, at Ten o'Clock; and the *Half-Moon*, at *Dunſtable* about Noon. The Price of them, and the Charge of Delivery to the Carrier, ſhall be paid as ſoon as you pleaſe within *London*, or returned by the Carrier to any Place on the Road.

*I am your humble Servant.*

*Direct the Sets to Mr.* —— *in* —— Salop, *and let me have a Line of Advice.*

### *The Author's Anſwer.*

*SIR,*

THE Beech-ſets I can get and ſend you in great Perfection; but the Witch-Elm Sets I cannot promiſe you. I have lately ſent great Numbers of valuable Sets to Gentlemen, and, if I can meet with the Elm Sort, will ſend them among the Beech-ſets. Therefore, if you pleaſe, I will ſend you one Thouſand of Beech-ſets; and, as you have been ſo judicious to inform me of the Time and the Day your Carrier paſſes through *Dunſtable*, I ſhall

take Care to draw them in ſuch due Time, that they ſhall arrive with you in a freſh moiſt Condition, which is the Life of Tranſplanting; but as I cannot be certain of the exact Days, I ſhall deliver them, becauſe of the Chance of froſty Weather, it muſt be left to me to do it by the firſt ſafeſt Opportunity. Pleaſe therefore to ſend —— for one Thouſand of Beech-ſets by your Carrier, and let him leave it in Mr. *Tibbet*'s Hands, at the *Half-Moon* at *Dunſtable*, to be paid me on Delivery of them, and you will oblige,

*Sir, Your moſt obedient humble Servant*

*Little Gaddeſden,* W. Ellis.
29 *Jan.* 1743.

*A Second Copy of a Letter from the ſame Gentleman.*

Salop, Feb. 6. 1743.

*SIR,*

I Received yours relating to the Beech-ſets, of which I deſire you would ſend me a Thouſand, ſince you have no Witch-Elm left. According to your Directions I have this Day paid ——, being the Sum you charge for them to our Carrier, who, leſt the ſame Man who goes this Journey ſhould not drive that Waggon, by which the Sets are to come, is to leave the Money with the Landlord, at the *Half-Moon* at *Dunſtable* to be paid you on the Delivery of the Sets. I am,

*Sir, your humble Servant.*

*The Author's Remarks on this Gentleman's Letters.*

ACcording to this Gentleman's Directions, I ſent him a Thouſand Beech-ſets in fine freſh Order to *Dunſtable*, on the 20th Day of *February*, 1743,

1743, for his planting them in his Park in *Shropſhire*; which leads me to take Notice of the good Notions this fore ſighted Gentleman entertained on reading the valuable Service Beech-Trees are of to Deer, Swine, and Poultry, but moſt of all to the firſt; who thereupon forthwith ſent to me for Sets of the ſame, which he was very right in doing, becauſe the freſh Sets that I ſent him, under proper Management, will run into Trees with great Expedition. And, that they may grow the faſter, I ſent ſuch Directions with them, that, if duly obſerved, will forward their Growth at a prodigious Rate; for, unleſs a proper Aid is applied to them in their firſt Shooting, and infant Growth, the Sets will loſe a great deal of Time, which will be prevented by what I adviſed him to make Uſe of; for I have planted Thouſands in my own Ground for making Trees; and, from the Succeſs I have met with, am enabled to adviſe all that buy Sets of me, how they may enjoy the ſame. And what I have further to remark is, that this Gentleman had not only Reaſon to plant Beech-ſets for their growing into fine large Trees; but he had an Eye to their producing of that excellent Seed, called *Beech-Maſte*, which yields Abundance of Oil, of a moſt ſalubrious Nature, to Deer in particular; for the Oil of theſe Kernels, in the cold wet Winter Seaſons, warms their Stomachs, and prevents the ill Effects of the raw, phlegmatic, flaſhy Graſs, that oftentimes cauſes the Breed of the Rot, or Red-Water, in their Bodies, that occaſions the Death of Thouſands of theſe valuable Animals, eſpecially where the Ground they feed on is of a clayey, or other ſtiff, wettiſh Nature, that lodges Rains, and thereby much contributes to the Deer's Deſtruction. This Maſte is likewiſe of a moſt nouriſhing Nature, inſomuch that it ſerves as Part of the Subſiſtence both of Red and Fallow Deer, during ſeveral of the Winter

Months, and thereby helps out the Scarcity of Graſs and Hay, and the more where Swine and Poultry are not admitted to feed amongſt them; for Hogs are ſo voracious of this Food, that they will in a little Time fat on it, if it is a plentiful Maſte Year, which it commonly is, every ſecond or third Year at moſt. I know a Gentleman, whoſe Park abounds with many Beech-Trees, keeps a Thouſand Head of Red and Fallow Deer, that in ſuch a Maſte Year receive a great deal of their Subſiſtence from it; and ſo do near half a Hundred of his Swine, as well as many wild Turkies, that ſometimes perch on theſe Trees, yet do not ſtray ſo far, but he enjoys the Benefit of them: So that here is a double Profit to be expected from planting Beech-ſets, one from the Wood, and the other from the Fruit; and this for a Trifle Charge at firſt, in Compariſon of the vaſt Returns theſe Sets may make in a few Years; for, if theſe and their young Trees are nouriſhed with an agreeable prolific Aſſiſtance beſides the Earth, they will grow up in half the Time they uſually do in their wild Growth. Wherefore it highly concerns Gentlemen, whoſe Land is proper for it, and who have Conveniency for the ſame, to plant the Silver Beechen Set, that will arrive to a Tree ſeveral Years ſooner, and with much more Certainty than Maſte will, though they are carried to a great Diſtance, as I ſhall further obſerve by and by. —— This Gentleman was likewiſe highly in the right, in ordering me to ſend him Witch-Elm Sets, for the great Conveniency and Profit they produce. It it a very valuable Tree in Parks, becauſe it grows a great Pace, and very large in a moiſt Soil, or rather in a Loam, between wet and dry (for this will flouriſh wherever the common Elm does) and becauſe it has a thick pleaſant, ſpongy, ſoft Rind on its Body, Arms, and Twigs, which renders it ſuch an agreeable Brouze

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or Food for Deer, in hard Weather eſpecially, that they will greedily feed on its Boughs or Twigs that are cut off for this Purpoſe, and love it ſo much, that they will almoſt eat up a ſmall Stick of it; and though this Tree does not yield any Fruit, yet it ſupplies it very much by the quick Growth of its Shoots, that are cut off for Brouſe, and for the nouriſhing heathful Qualities of its Bark, that ſerves to dry up the ſuperfluous Moiſture of their Bodies, and at the ſame Time, as I ſaid, furniſhes them with the Change of a beloved Food. This very ſerviceable Tree may, for theſe Purpoſes, be planted in Rows for making ornamental Viſtoes and Walks, or in other Shapes; and therefore it will be very well worth any Perſon's While, who has a Conveniency of planting this Tree in Parks, or incloſed Fields, to do it with Expedition. And, though I cannot furniſh Witch-Elm Sets to any Perſon this Year, yet I hope to have Plenty of them another. But, to be more compleat in furniſhing a Park with neceſſary Trees for the Service of Deer, there ought to be a ſufficient Number of Horſe-cheſnut Trees planted, that their large Nuts may ſerve as Part of the Deer's Subſiſtence; for theſe Trees, where they arrive to a large Head, will bear conſiderable Quantities of theſe Horſe-cheſnuts, that the Deer will eat; and, as they are of a bitteriſh Taſte, I ſuppoſe they may at the ſame Time become, in ſome Degree, an Antidote to, or Remedy for the Worms. But this is not all: The Horſe-cheſnut Tree, having a moſt light Wood, grows with great Expedition, in either wet or dry Soils, and yields to their Owner a charming Sight in the Spring and Summer-time, by their large verdant Leaves, and fine white large Bell Flowers, that perfume the ambient Air with fragrant Odours, afford a moſt pleaſant Shade and Shelter in ſultry Seaſons, as they ſtand in Rows, and compoſe noble Viſtoes and Walks. Now it is

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not too late to plant any of theſe Sets or Trees; *March* generally gives us a good Opportunity for this Purpoſe; and, if it is a dry *March*, it is only planting them in a right Manner, and then there is no Danger of their growing well, let the Weather be how it will; for this chief Reaſon it is, that I always ſend, with the Sets or Trees I furniſh to any Perſon, ample Directions for their planting, and cauſing them to run into a quick Growth, being a ſure Method that never fails making Trees grow large in a little Time. A Proof of which I ſhew to any Perſon, that will be pleaſed to come and ſee conſiderable Numbers of divers Sorts of Standard Fruit-trees, growing in ſeveral of my Arable and Meadow incloſed Fields; which generally not only yield me an annual Profit, by their Fruit, but ſerve likewiſe to ſhade and ſhelter my Cattle in the hot and cold Seaſons of the Year.

*The Copy of a Letter ſent to this Author, for recommending a Ploughman Servant.*

*SIR,*

I Underſtand you are a Perſon that takes a great deal of Care and Pains to do the World Service in many Branches of Huſbandry; and among the reſt, to help Gentlemen to Ploughmen, capable of performing what they are hired for. This therefore is to deſire you will ſend me one that can act as ſuch, and that knows how to buy and ſell Cattle, and manage a large Farm. Pleaſe to let me have an Anſwer, as ſoon as you can, to

*Sir, your humble Servant.*

20 *Decem. To Mr.* Ellis, *at* Little Gaddeſden, *near* Hempſtead *in* Hertfordſhire.

*The*

*The Author's Answer.*

*SIR,* *Little Gaddesden, Decem.* 2. 1743.

IN answer to yours, this is to infotm you, that I have pitched on a Man, that, I think, is capable of giving you Satisfaction, in the Discharge of what he undertakes. I do assure you, he has the good Character of the Country about him, for an excellent Ploughman; one that understands to buy and sell Cattle, plaish Hedges, thrash and clean Corn, sow, reap, and mow, and do most, or all Work belonging to a Farm; for he has been brought up in a large Farm, and lived all his Life where a great deal of Business has been done; is a sober Fellow, not given to Swearing, and Raking about, and, I think, he is one that will make you a compleat Servant, because he has acted as the Head, or Chief one, this two or three Years past in a Farm of a Hundred a Year. I am very tender in my Recommendation of a Servant, as well knowing my Reputation lies at Stake; but, was it my own Case, I would venture upon this Youngster, who am,

*Sir, your most obedient humble Servant,*

*The Copy of a Second Letter from the same Gentleman.*

*SIR,* *January* 2. 1743.

I Received yours, dated the 27th of *December*, and I am pleased to find, that you are very modest in your Recommendation of the Man you think will serve. I would have one that should answer the Character that you have given in your Book. I would therefore hope you have taken Care to acquaint him, what it is that I shall expect from him, which you can easily do, by reading over to him your own Character of a Ploughman; for such a Man,

Man, if he be diligent, and no other, will render himſelf agreeable, for the whole Management of the Farm will lie upon him. As to the Wages, you mention, I am willing to give, on Condition that the Man, by his Performance, anſwers your Character. He may come and try for two or three Months, during which Time his Wages ſhall go on, and we ſhall both be capable of making a Judgment. The half Guinea, with your Charges, ſhall be given you, with Thanks for your Trouble. If there be any further Occaſion of Writing, let me hear the next Poſt; if not, I ſhall expect to ſee the young Man in eight or ten Days at fartheſt. I am,

*Your obliged humble Servant.*

P. S. *I have thought it proper to acquaint you, that the Man, I hire, is to ſerve the Right Hon. the Earl of* ——— *at* ——— *in* ———

This young Man was hired accordingly, and when the Gentleman ſaw and examined him, he gave him larger Wages, than he demanded, and at the ſame Time ſent me a Gratuity for my Trouble and Charges.

*F I N I S.*

# PREFACE

## For the Month of *May*.

IN *this Monthly Treatiſe of the* MODERN HUSBANDMAN, *I begin with thoſe moſt uſeful Articles,* Plowing *and* Sowing; *and intend to purſue the ſame Method throughout the whole Work; and theſe, as they are now performed by the moſt judicious Farmers for a Livelihood, in the ſeveral Operations of Broad, Bout, Ridge, and Drill-work, by the Two-wheel, One-wheel, Foot, and Three-wheel, and Pulley Drill-ploughs, Horſe-breaks ana Sheims, &c. Of all which I ſhall be the more*

*particular, becauſe no Author has ever yet publiſhed the common practical Ways of theſe Inſtruments, as they have been, and are at this Time, in Uſe: Which I could not do, had I not travelled ſeveral Years for informing my Judgment, by making Obſervations on the numerous Objects that preſented themſelves to my View, as well as converſing and correſponding with Gentlemen, Farmers, and others; by which, with the twenty-four Years Experience in the Management of my own Farm, and the Knowledge of my Neighbours and Country's Practice, I am enabled to compoſe Monthly Books of* Facts, *without being beholden to a Maſs of uncertain* Theory. Agriculture *began with the World, and was the Employment of its firſt Inhabitant, who was to get his Bread by the Sweat of his Brows: Therefore, as to its Antiquity, it, undoubtedly, may be dated from* Adam, *who was placed in the terreſtrial Paradiſe for cultivating it, and enjoying its Fruits by the Help of the Spade, Plough, or other Inſtrument: An Invention not ſince altogether found out by fortuitous Accidents, as ſome have vainly conjectured, almoſt into a Notion of Certainly. But, waving inſignificant Niceties of Diſpute, it muſt be owned, that the Improvement of* Agriculture, *within theſe very few Years laſt paſt, has made our* Britain *and* Ireland *exceed all Countries in this Science; and happy for us it is ſo, ſince, as the World grows older and more populated, the good Providence of God has wiſely contrived it, that, with Neceſſity, Wiſdom ſhould be given to Men to find out Ways and Means to*

*ſupply*

*ſupply it. And, as nothing can more contribute to this great End, than to refreſh and fertiliſe our Mother Earth in the quickeſt and cheapeſt Manner, it is moſt true, that the Plough can anſwer this Purpoſe beyond all other Inventions. And, as the Creator has been pleaſed to make this World abound with different Earths and Situations, it is incumbent on the Farmer to furniſh himſelf with that Sort, which beſt ſuits the Nature of his Land. Hence it is, that the Wheel-plough, or any of the Drill-kind, is as uſeleſs in ſome Vales, as the Foot-plough is in ſome dry ſtony Grounds of the* Chilturn: *For, though the Soil and Seed be good, the Manure plenty, and all other neceſſary Contingencies are compleatly furniſhed; yet, if the Plowing-Part is not performed in due Order, our Return at Harveſt will, in Courſe, be the leſs. Wherefore, as God provides for many good Things of this World, by the Labours of the Ploughman, it is our neceſſary Buſineſs to find out all poſſible Improvements relating thereunto; as the late dreadful Scarcity of Corn &c. in 1740, is a moſt woful but plain Proof of. The Labours of a Country Life will riſe in our Eſteem, if, beſides their Agreeableneſs to our Nature and Frame, we conſider them as the Source of all the Wealth of the Nation:* Trade *and* Commerce, *which are eſteemed the two greateſt Fountains of national Wealth, cannot have Place, but in the Foundation of this original and natural Employment.* Agriculture *not only furniſhes Wealth to a Nation, but Hands alſo able and willing to defend it, and is, perhaps, the*

*beſt Nurſery of good Soldiery in the World; and the Country Life, which thus qualifies Men for neceſſary Defence, naturaly introduces a Diſpoſition averſe to civil Tumult and offenſive War: The Occaſion over, their Swords eaſily convert into Plough-ſhares, and their Spears into Pruning-hooks.* Agriculture *was, perhaps, the Parent of all thoſe Sciences, Arts, and Employments, which have ſince carried their Heads ſo far above her: But it riſes ſtill higher, and read continual Lectures, not only in Speculative, but Practical Philoſophy; it conducts to Morality, and every ſocial Virtue; and enforces a due Regard to, and Dependance on the Supreme Being; in which conſiſts the Eſſence of Religion. As to the chief Particulars in this, and in the Eleven Monthly Books that are to follow, they are too many to be mentioned here; therefore I ſhall conclude this* Preface *with giving you only a Hint of a very few of them, as follows,* viz.—*The Article of* Suckling Houſe-lambs, *I am ſenſible, has been wrote on by Mr.* BRADLEY; *by my Account, it may be carried on by thoſe Farmers, who never ſaw the Buſineſs performed in their Life, and that in the moſt profitable Manner, by cauſing their Ewes to take Ram at any Time, and lamb twice a Year; whereby ſeveral Cities and great Towns will undoubtedly, and in a little Time, be ſupplied with that dainty Food Houſe-lamb all the Year, as is done at* London. *The like Profit may be had by the Fleſh of ſuckling Calves, which, by ſeveral artificial Ways, may be made very white, and ſoon fat. The new invented,*

*vented, light, Three-wheel and Pulley-ploughs, which plow, ſow, and harrow, all at a Time, with only one, or two Horſes at moſt; and the Horſe-break and* Dutch *Hough, which, in a few Weeks after, is to follow it, are ſuch ſerviceable Inſtruments, that, I am ſure, Thouſands would have, if they knew their Benefits in all dry Loams, or in any other Soil, where a Drill can be rightly made, and the Owner's Conveniency will allow of it, for ſowing Thetches, Peaſe Horſe-beans, Kidney-beans, Barley, Wheat,* &c. *therein, as it is now done by Farmers for a Livelihood. In* February, 1738, *I ſent the Three-wheel Drill-plough and Horſe-break into* York-ſhire, *to a Gentleman who has ſince expreſſed himſelf with Abundance of Satisfaction. Likewiſe the Improvement of Hop-plantations by the now-invented Prong-plough, Hough-plough or Sheim, Prong-ſpade, Prong-hough, and Beck-hough, as they are frequently uſed by ſome of the moſt ingenious Husbandman, to their great Advantage. The invaluable Receipt, to prevent Sheep's Rotting in the worſt Ground, I learned of a Farmer, who ſaved a Flock of three hundred by it, when all his Neighbours Sheep died in the ſame Soil and Situation; being a Remedy ſo eaſy to come by, that it may be had in moſt Villages for about a Penny Charge, which is enough to ſecure a Sheep's Health ſix Months. Several Ways to make a Cow take Bull at any Time, and ſtand to it, according to the* Cheſhire, Suffolk, *and other Practice. To make Butter in the ſweeteſt Manner, after a Method approved of by the*

Royal

Royal Society: *Alſo to prevent its being tainted by Leaves, or other rank Food; and likewiſe a Way to make it preſently, without Churning; with many other valuable Secrets relating to the Dairy. To make many Sorts of Cheeſe. Infallibly to prevent the Fly's Deſtroying young ſeedling Turneps for Two-pence an Acre Charge in all Weathers, and to cauſe the Seed to ſprout in a very little Time after it is ſown, in the drieſt Seaſon. To hinder the Slug's doing Miſchief to young Turneps, Savoys, Flax,* &c. *in dry, or wet Weather, without the Help of Soot, Lime, Tobacco-ſand or other powdered Application. To keep off the Damage of Field-fowls from Turnep-ſeed, new-ſown Corn, or Fruit-trees, at any Diſtance from a Houſe, by a Mixture of cheap Ingredients. To ſow Barley in* April, *and yet be as forward as that ſown in* March; *and to increaſe a Crop for Six-pence an Acre Charge, without the help of Nitre, by which the Damage of Froſts, Chills, and Droughts are moſtly prevented; and which will keep off the Spoil of Worms, both in this Grain, and new-ſown Wheat. To cure Diſtempers in Horſes, Cows, and Sheep, as practiced by Farmers. To keep off the Breed of the Caterpillar from young Turneps, Cole, Cabbages, and other Plants. To prevent the Garget, or any other Inflammation in the Cow's Bag, and to increaſe and ſweeten her Milk by a cheap Drink, given but twice to a Cow, as it is done in common by the Dairy Farmers in a certain County. A new Method to ſupply the Loſs of wild Pheaſants by breeding them tame, as it*

*is*

*is now done by ſeveral Farmers for paying their Rents, and is a vaſt and cheap Improvement. How to deſtroy the Fox, Badger, Polecat, and other Field Fowls, that are pernicious to the Farmer, by new and eaſy Ways. To keep Eggs perfectly ſound two Years for no Charge, ſo that, at the End of that Time, they may be ſet under Hens, as well as new-laid ones. The Culture of Canary, Coriander, and Carraway-ſeed, Teaſels, the great-headed Poppy, and Dwarf-roſes. A ſure and moſt cheap Way to prepare Wheat-ſeed for preventing ſmutty Ears, keeping off the Worm, and cauſing a greater Increaſe, by ſeveral new Ways, without the Help of Brine, or Stale. To breed that delicate, large, hardy Fowl, the Buſtard, as tame as common Turkies in a Farm-yard, at the ſame Trouble and Charge, but for three Times the Profit. An Account of ſeveral Impoſitions practiced in the Sale of Cows, Horſes, &c. And that very uſeful, but copious Account of raiſing Plantations of proper Fruit-trees; with a Thouſand other curious and profitable Matters (never before publiſhed) which this and my other Monthly Books will contain, from the Experience of myſelf, Neighbours, and many others; who, undoubtedly, have been at great Expence and Labour in finding them out, and which, thus, may be enjoyed for a trifle Coſt.*

*N. B.* I furniſh any Perſon with the *Three-wheel Drill-plough*, *Horſe-break*, and other Inſtruments uſually employed in Farming, to any Part of *Great-Britain* or *Ireland*, at reaſonable Rates; and anſwer all Letters, provided Poſtage is paid to my Houſe.

THE

A

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THE

# CHAP. I.

## *Of Ploughs and Plowing.*

YOU that have not begun Fallowing in laſt Month, fail not to do it in this. In the *Chilturn* or Hilly Country, it may be performed with the two Wheel ſingle Fallow-Plough, with the two Wheel double Plough, with the Turnriſe-Plough, and with three Sorts of one Wheel Ploughs, *&c.* In the Vale, or low Grounds they uſe but two Sorts, the Swing-Plough, and the Foot-Plough: Of theſe I ſhall give particular Accounts, as follows:

And firſt I ſhall begin with the two Wheel ſingle Fallow-Plough; of which there are ſeveral Sorts now in Uſe. One is called the *Hertfordſhire*-Plough, whoſe Aſhen-beam is nine Feet long, its iron Share four Feet, four Inches in Length, and made with two Mortaiſes, weighing about 50*lb.* which by the Help of a broad Board ſo fortifies it, that it is ſtrong enough, with its pecked Point, to plow through the moſt ſtony Land in this Country,

whoſe dry Gravels, tenacious Clays, and large Flints, very often try its Strength, and ſometimes break it; for which Reaſon we are frequently obliged to draw with four, five, and ſix Horſes, who find Work enough to manage an Acre and an half in a Day in dry Seaſons. The Plough-man alſo is very often hard put to it, becauſe he muſt be both an able and ſkilful one, to hold this Plough in ſuch Weather and Ground in the Fallow-time: When the Stones cauſe the Handles to jirk and ſtrain him to that Degree, as defies an ordinary Workman to do it as it ſhould be; and thus in ſome of our hard gravelly Lands, they will wear out two or three Points in one Day, which coſt ſix Pence each. Its Land-Wheel is 21 Inches wide, and its Thorough Wheel 24 Inches, and is drawn by Horſes in a double Row.

*The two Wheel double* Hertfordſhire *Plough.* This has two broad Boards, two Shares, two Coulters, and but one Beam; but I ſhall here decline the particular Deſcription of it, becauſe I have amply done it in my laſt Monthly Book, *Page* 97, where you may ſee its excellent Uſes, which, if thoroughly known to the World, would invite many Farmers and Gentlemen to ſend for them at twice their preſent Coſt. And as I have had ſeveral Letters of late for this Purpoſe, to know firſt how much the Price of one is, I ſhall here, to ſave the like Trouble, ſet it down, *viz.* The Wood Work of the bare Plough, excluſive of any Part of the Wheel Carriage, will coſt 16 *s.* The Iron Work of only the two Shares, two Coulters and Hooks, will coſt 4*d. per* Pound, weighing in all near 70*lb.* ſo that the Plough alone will coſt 40*s.* and as for the Wheel Carriage, it may be had in many Counties where the Plough Part cannot.

*Turnriſe Plough.* This is alſo a two Wheel ſingle Plough, and far lighter than the laſt, becauſe, though

though its Wheels are higher, its Share is leſs than eighteen Inches long, being made with a round Socket and Point, weighing ten or fifteen Pounds, has no broad Board, but inſtead thereof, a roundiſh moveable wooden Turnriſe, about four Inches Diameter and a Yard long, which at every Land's-End, the Plough-Boy ſcrapes in wettiſh Weather, and ſhifts in leſs than a Minute to the other Side, whereby it will plow a Field without Hentings, and Loſing Time and Labour to go round its Work, as all our *Hertfordſhire* Ploughs are obliged to do, and is alſo of ſo clever and ſtrong a Make, that it will out-do ours in plowing among large rocky Stones, and entering the Earth deeper, by the Help of its round Share and Timber; which is ſo very ſerviceable, that I heard of an obſtinate Farmer, who going out of our County, to live towards *Orford* in *Kent*, would make Uſe of no other than our broad Board-Plough, till he run himſelf out of ſeveral hundred Pound: But at laſt being perſuaded to lay it by, and work only with the Turnriſe Sort, as his Neighbours did, he recovered his Loſſes; and the Reaſon they aſſigned me for his Running out was, that, his Farm being a very deep Mould, our *Hertfordſhire* Plough would not go deep enough to extirpate the Roots of Weeds, and raiſe the beſt Earth, which the Turnriſe would effectually do. This Inſtrument is likewiſe moſt ſerviceable in plowing the Sides of ſteep Hills, which it will do the beſt of all others, becauſe it plows the Ground all one Way, that no Sort whatſoever beſides can perform ſo well; and is of the greater Uſe, by Reaſon the making of Hentings, and Plowing two Ways, according to the common Method of round Work, will not here anſwer the Farmers Purpoſe. In ſhort this well invented Machine will plow up their hard Chalks, Gravels, and ſtony Clays in Fallow Seaſon, better

than any other Sort whatſoever, and will perform round Work, or any other Operation, that a Fallow Wheel-Plough is uſed to do. There are alſo ſome of theſe with a flat Chiſſel Point about two Inches wide.

*The Jockey, or* Flemiſh, *two Wheel ſingle Plough.* Is uſed in Fallow and other Seaſons in ſandy and light Loams, having only its ſingle Staple for a Handle; by which the Plough-man wholly guides it by one Hand, and at the ſame Time with the Help of a ſmall Cord or Line, which he faſtens to the Horſes Bits, he drives two Horſes a-breaſt, and one before, and ſometimes three in a-breaſt, but commonly only two, all Day long without the Help of a Boy; and that in performing moſt Sorts of plowing, being a much lighter Inſtrument than all others that I ever ſaw of the Wheel Sort. Its turn up Beam being about ſix Feet and a half long: Its flat winged iron Share weighing about eight Pounds, being a Foot in Length, made to put on a Socket of Wood, and held ſteady by an iron Hook from the Beam, with a broad Board of Wood, but generally with a thin hammered Iron one, where there is a weak Team; but if it is a ſtrong Team, they have of late got into the Uſe of one made of Caſt Iron, that coſts about ſix Shillings, and will wear many Years. This light ſhort Plough is drawn by a high Carriage, whoſe Wheels are above two Feet Diameter, ſometimes ringed with Iron, and ſometimes with entire Wood lapped round the Spoke; and though this has but very lately come into Uſe in *England*, yet it has in many Places ſupplanted the Foot-Ploughs that were in Uſe before this.

*The one Wheel* Glouceſterſhire *ſingle Fallow-Plough.* This, though it has been in *Glouceſterſhire*, and elſewhere, ſome Time, is but lately introduced among our Farmers, as being much lighter than our two

Wheel

Wheel Fallow-Plough both in its Wood and Iron Work, has a Share with only one Mortaiſe, has two fixed Handles, a Yard long each, which, with its ſingle Wheel, joined to the Beam near its fore End, keeps its pecked Share from entering the Ground too deep, and makes it turn eaſy at the Land's-End; all which Conveniences ſave one Horſe in four, in Compariſon of the two Wheel *Hertfordſhire* Fallow-Plough: In ſhort, this one Wheel Plough, which is drawn by Horſes in length, differs from ſome of the Foot-Ploughs only in its Wheel, whoſe Diameter is about eighteen Inches, and will perform various Works in our *Chilturn* Lands; but its Wheel is very apt to overturn, and thus becomes troubleſome to the Ploughman, ſo that now it is in leſs Repute than before.

*Overcheek one Wheel Plough.*—This new invented Plough is alſo worked with one Wheel, of about a Foot Diameter in the Clear, that turns round directly under, tho' at ſome Diſtance from the Beam: It performs well in ſandy, ſtony Lands, becauſe its Socket Share is fixed on a round Piece of Wood, and goes ſteady: It is alſo uſed in chalky Grounds to great Advantage, becauſe it proves a light Plough after the Horſes. We are Strangers to this Inſtrument in *Hertfordſhire*, but I have ſeen ſeveral of theſe, as well as the Under Cheek-Ploughs, uſed in a certain County that I have travelled through this Summer 1738. *Undercheek one Wheel-Plough.*—This differs from the Overcheek Sort, only by a little Alteration in its Make, ſome have one, and ſome the other, even in the ſame Pariſh. One will not clog in dirty Weather ſo ſoon as the other, and therefore preferred by ſome; they are both pretty Sorts of Ploughs; but more of theſe two in next Month.

*The Foot-Plough.* — Of this there are ſeveral Sorts, one with a ſtraight Beam, between eight and nine

nine Feet long at *Chesterford*, near *Saffron Walden*, that I have seen drawn by two Horses in a-breast, in a light loamy Ground, and drove only by the Ploughman without a Boy, by the Help of a four Horse Coach Whip, whose Thong and Lash I measured to be above nine Feet. But the common Sort of Foot-Plough has its Beam a little bending towards the End, of about six Feet long, a broad Share, and is used chiefly in ridging up Vale Land, and casting them down. This, for its extraordinary Lightness, of late is drawn by two and three Horses in Length, in our *Chilturn*, gravelly, and stony Grounds; because, by the Help of a pecked Share, it saves the Draught of one Horse in four, which we are obliged to use for the same Work with our two Wheel Plough.

The single Mortaised Foot-Plough is used in our *Chilturn*, stony Grounds, to draw out the Sleeving and Ridge Thoroughs of the Wheat-Stitch, and which is immediately followed by the Wheel Wheat-Stitch Plough, that hents up and finishes the Stitch; and why the Foot-Plough does not perform the whole Work, is, because it is apt to wabble, and not go so straight as the Wheel one; yet this may be contrived to go more steady and even, if it is made with two Mortaises and a pecked Share, as some have them. Others for this Purpose, instead of an iron Foot, have a small iron Wheel, about six Inches Diameter, that causes an easier Draught to the Horses, when they perform the last Plowings with it, for sowing Barley, Turneps, *French* Wheat, Weld, *&c.* by only two Horses in length, which helps forward the Sowing of Corn with a weak Team. The Foot-Plough is also very valuable for plowing up Turnep Ground shallow, that the Sheep's Dung may not be buried. The same Conveniency answers when Pease are sown, broad-cast, and plowed in. Operations that cannot be so

well

well performed by the Wheel-Plough, becauſe it goes ſo deep, as makes it apt to bury the Corn, and many Crops have ſuffered by this very Means.

*The Drill three Wheel Plough.* — In my next Monthly Book I ſhall give an Account of this excellent Inſtrument, and ſo of the *Pulley Drill-Plough*, which is alſo of very great Service; *Breaks*, *Hough-Ploughs*, *Prong and other Spades*, are likewiſe to be deſcribed in the next Monthly Book, and their ſeveral profitable Uſes amply explained.

*The Swing Plough.*— Is a Sort of Foot-Plough, much uſed in *Middleſex*, in their flat clayey Grounds. Its Beam is raiſed higher, or lower, at Pleaſure, by Ropes faſtened to a Cart-ſaddle on the hindmoſt Horſe. With this light Inſtrument they lay up their Lands in three and four Bouts, and it is drawn commonly by Horſes in Length: And it is in this Sort of ſituated Earth, that I obſerved they often loſe great Part of their Crops for Want of getting it into a timely Tilth, which in my humble Opinion they might more expeditiouſly do, if they uſed our two Wheel Pea-Stitch Plough, or a narrow Fallow Wheel-Plough, in the Summer-time eſpecially, after their Ground has been fallowed by their Swing-Plough. And that, by plowing it acroſs into ſingle ſharp Bouts, and afterwards by plowing them down again with the ſame; which, after due Harrowing, may then be plowed, with their Swing-Plough, into their common three and four Bout Lands, in order to ſow Wheat.

*The Creeper or Bobtail Plough.*—Is a two Wheel-Plough, differing but very little from the Fallow-Wheel-Plough, but that its Share is only three Feet in Length, and but one iron Mortaiſe. Its Work is to plow up Stubbles, particularly in *Chilturn* Land, in wet Weather, becauſe its Share, not being faſtened to a Staple behind, gives room for the Earth to tumble off, that it does not hang on,

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and load the Plough, as it is apt to do in the long Shared Sort. Some ſo affect this Plough, that they make it their common one in Fallow and other Seaſons: But in very dry hard Grounds, this Plough is not capable of making its Way ſo eaſy as the double mortaiſed Fallow Wheel-Plough can. But there are ſeveral other Sorts of Ploughs that are to be uſed out of the Fallow Seaſon, that I intend, in proper Months, to give an Account of. In the mean Time, all, or any of the before mentioned, if any Perſon thinks fit to furniſh himſelf with, I will do it at their prime coſt, only allowing me what is reaſonable for my Trouble. For where a Farmer occupies a Hundred or more Acres of arable Land, he cannot be compleatly furniſhed without moſt of theſe Sorts, eſpecially if he lives in a *Chilturn* Country, and his Ground is of ſeveral Natures, which is very common. But I will ſuppoſe it to be only one Sort, and that a Loam; they are then ſtill neceſſary, becauſe of the ſeveral Conditions their Ground may be in, in different Seaſons of the Year, *&c.* A Proof of which is obvious in the more plentiful Production of Corn, Turneps, Graſs, and other Vegetables on the Land of him who is Maſter of moſt Sorts of theſe Ploughs.

### *Operations of different Ploughs.*

*Fallowing a ſtill Soil.*— If a Crop of Beans or Peaſe grew laſt on four thorough Stitches, then either with the double, or any of the ſingle Fallow-Ploughs, plow them into four thorough Stitches again; the firſt will do it at a Bout, or going once backward and forward, when the ſingle one muſt be drawn four Times in all; and by this Sort of plowing is almoſt all the Ground removed, ſo that, where the great Partition thorough was before, the Ridge of the Stitch lies now. The next Time, or the firſt Stirree, plow it again in the very ſame Manner;

Manner; but the third Time or ſecond Stirree, the Stitches ſhould be plowed into Bouts, with the ſingle Fallow-Wheel-Plough. After this it ſhould be thoroughed down, and harrowed plain for plowing the Ground next Time croſs-ways, and ſowing Wheat in Stitches.

*A ſecond Way to fallow a ſtiff Soil.* — Is to plow Barley, Oat, or Pea Stubbles, that lay in broad Lands before, into broad Lands again, which is what we call clean Plowing; and, after it has lain ſome Time, either harrow it or forbear, as the Ground is more or leſs fine, and bout it a-croſs; then, at the next Operation, bout it again off the laſt Bouts; after this, thorough it down, and harrow it plain for plowing, and ſowing Wheat in Stitches, or broad Lands: Theſe are the two beſt Methods for reducing ſtiff Clays, or ſour Loams, into a fine ſweet Tilth againſt *September* for ſowing Wheat, for theſe tenacious ſurly Soils will ſeldom yield to a ſingle Bouting; therefore, for Aſſurance, the moſt judicious Huſbandmen, in our *Chilturn* incloſed Country, commonly give them two; however, this Work ſhould have been begun in *April*.

*A third Way.* — 'Tis the Method of ſome to fallow their ſtiff Ground which lay laſt in broad Lands into Bouts; the next Time they plow it into Bouts again, after this, they thorough down the Bouts, and harrow it plain, when it is ready to plow and ſow their Wheat. But this laſt is not ſo good a Way as the two former, becauſe it does not clean the Land ſo well; however, this ought to be well obſerved, That two Boutings are better than once four Thoroughing, tho' the ſingle Wheel-Plough goes not oftener in two Bouts than in one four thoroughed Stitch; yet is the Bouting far more preferable on Account of its laying the Land deeper and ſharper up, for the Sun and Air to penetrate its Body the eaſier.

*A fourth Way.*—Others again having Pea-Stitches, which, when laſt ſown, were harrowed down very flat, which Poſture makes them fallow it into four thorough Stitches a-croſs the former, and after they have lain ſome time, they harrow them lengthways, and make Bouts off the four thoroughed Stitches; then they bout it again, but the next time they thorough them down, plow, and ſow their Wheat in Stitches on a ſtiff ſtony Ground. As I ſaid in laſt Month, better an *April* Sop than a *May* Clot; yet this Neglect often happens, by Reaſon they have no other Graſs than what the Fallow-Land affords to feed their Ewes and Lambs, but then ſuch Farmers run a great Riſque of a good Tilth, either for Turneps or Wheat; however, better late than never, remembering well that a late Fallow makes a raw Tilth, unleſs a dry Summer ſucceeds. Again, the Effect oftentimes of a late Fallow is, that your Wheat will be overtaken the following Year with the deſtructive black Bennet, *&c.* which generally, where it is thick, ruins a Crop of Corn, and then ſee if Weeds will pay Rent. The good Huſbandman, who fallowed the Beginning of *April*, the latter End of this Month, will be making his firſt Stirree, when the bad one will be only fallowing his ſour Ground, as may be too often ſeen in but little Diſtances, with Regret, by Men of Judgment, who travel the Country.

*Plowing eaſy.* — Now you, that keep but two or three Horſes for plowing *Chilturn* ſtiff Land, may very likely, in this Month, meet with dry hard Soils, that require four or ſix Horſes to draw the Wheel-Fallow-Plough, which turns a Thorough of 12 or 14 Inches broad; and proves too hard for weak Teams. To remedy this, uſe the Wheel Stitch Pea-Plough, which turns only a Thorough of about eight Inches broad, and you'll find it go eaſier by one Horſe in four than the other can; and indeed

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it is much better for the Land, becauſe it cuts it into narrower Thoroughs, and therefore fines it ſooner, and prevents the Growth of Weeds much better; ſo likewiſe will the before-mentioned one Wheel, or Foot-Plough do as being much lighter in its Iron and Wood Work. But where you have a ſtrong Team, the two Wheel Fallow-Plough will certainly do the moſt Work in the leaſt Time; and where there is Occaſion to uſe this ſort of Plough much, it is very well worth while to have two Sorts of them, one to plow Bouts with, and the other broad Lands; that for Bouting ſhould have a broad-Board an Inch higher than the other, that it may lay up the Ridge ſecure and ſharp, and its Sheaf and Share pitched more landing than the common Sort. But, beſides the Pea-Stitch and Foot-Ploughs, the Bob-tail-Wheel-Plough is now much uſed for a weak Team, for that its picked ſhort Share will not clog like others, but is lighter both for the Horſes and Man.

*The Sluggard Husbandman.*—It is an old Saying, that the Sluggard Huſbandman ſucceeds once in ſeven Years, but of late it fell to his Turn oftener, for, in the Years 1734 and 1738, the Weather was ſo mild and wet, that it cauſed the well-dreſſed Grounds to produce ſuch rank Wheat, that it yielded hardly above half a Crop of Corn, but a great deal of Straw, and at the ſame time ſo fertiliſed the poor rough tilled Lands, as made them return full Crops. We ſay a dry *March*, a wet *April*, and a dry *May* make Plenty; but if theſe three Months are wet, there will be a great deal of Straw, and little Corn. But now you, who bouted up your Oat and Pea Stubbles, for ſowing Turneps in *June*, ſhould have bouted them off the laſt Bouts in *March* or *April* at fartheſt; but you that bout for Wheat, and have not done it laſt Month, neglect it no longer than this. He is an ill Huſbandman that has a Tilth to make, when he wants it.

*A quick Way to make a Tilth.* This I never knew but one Man do, which was after the following Method, *viz.* at a Fallow-time, either in this or laſt Month, where the Ground was not too clung and hard, he bouted his Stitches or broad Lands, till he had done ten Bouts; then immediately returned where he begun, and bouted off the laſt Bouts, and in this Manner proceeded till he had done the Field: Now why he plowed in this uncommon Method was to make a Tilth of the Ground as ſoon as poſſible, for ſingle Bouting, in itſelf, is reckoned but half Plowing, but this double Work in one Day is whole Plowing; yet I don't doubt of an Objection in this Caſe, and that is, by ſo doing, he turns up the Graſs again, which he plowed in the firſt Bouts; to this I anſwer, that it is an Argument of no great Force, becauſe the Earth is all, or moſt of it, removed from one Place to another, and thereby in a great Meaſure prevents the Re-growth of the Graſs and Weeds; but there will be no need of any ſuch Objection, if ſuch Boutings are performed in dry Weather, for then one Plowing is oftentimes better than two in wet Seaſons.

*How to plow a Clover-lay, in order to obtain a good Crop of Wheat.*—You that deſign to ſow Wheat in a good Tilth after Clover, plow it up immediately after the firſt Crop is eaten or mowed off (as is commonly done in this Month) into broad Lands, for the Cruſt to lie and rot; then, about ſix Weeks after harrow it plain; when this is done, hack it acroſs, and ſo let it remain till after Harveſt; then harrow it ſoundly, and if it is fine enough, dung or fold, and ſow Wheat in Stitches: But if it is not a thorough good Tilth, hack it a ſecond Time acroſs the laſt Way, then harrow it plain, dung, and ſow.

*Plow-*

*Plowings to be performed in* May.

*For Wheat.* — Towards the latter End of this Month the firſt Stirree, or ſecond Plowing after Fallowing in *April*, is generally done in the *Chilturn* incloſed Fields; this is by ſome called *Tuy-fallowing*, and is either performed in broad Lands, in Bouts, or in four thoroughed Stitches, for ſowing Wheat in *September* or *October*: If in Stitches, off a broad Land, it is the moſt difficult Sort of Plowing of all others, becauſe the Plowman has here no Guide, but his own Judgment to direct him; whereas, when he makes a Stitch off a Bout, or off an old Stitch, he cannot well miſs it; but he that can raiſe a four thorough Stitch, and lay it round and handſome off a broad Land, is a Workman indeed. This therefore, as I ſaid before, is an excellent Way to prepare all ſtiff Grounds for Wheat, becauſe it beſt kills Weeds, ſweetens and hollows the Earth, and expoſes it beyond all other Methods, to receive the nitrous Influences of the Air, Rains, and Dews.

*Bouting for Turneps.* — In this Month likewiſe, ſome will ſtir that Land which they fallowed in *April* in broad Lands; thus, they firſt harrow it acroſs, and then bout it acroſs; after which it is to lie ſome Time, then they back-bout it; in the next Place, they firſt harrow it plain over-thwart, and plow it acroſs into broad Lands, for harrowing in Turnep Seed. This is an approved Way, to reduce a ſtiff Earth into a ſudden Sweetneſs, and make it very fine withal.

*Hacking for a Crop of Turneps.*—In this Month alſo, that Ground which was fallowed in *April* into broad Lands, for ſowing Turneps in *June* or *July*, is commonly ſtirred in this Month into Hacks, which after they have lain a Week or Fortnight, the Hacks are to be harrowed acroſs; and then, juſt before they ſow Turneps, they draw out their Thoroughs acroſs

acroſs, and plough acroſs, the laſt Way into broad Lands, in which they harrow their Turnep-Seed; and thus a ſtiff Soil is expeditiouſly brought into a Fineneſs, for this uſeful Root to grow into a deſired Bigneſs.

*A Proceſs of Plowing up Bean Stitches, for ſowing Barley and Honey-Suckle Seed.* —In *November* 1735, I plowed a Field of four thorough Stitches into four thorough Stitches again, which lay in this Poſture till the Beginning of *March*, when I back-bouted the Stitches, and let them ſo remain till about the firſt of *April*, and then I harrowed it plain: After this I plowed the Ground into broad Lands acroſs the laſt Way, and immediately, on the rough Earth, I ſowed ſhort Horſe-dung well rotted, that I had ſaved under Covers the Winter before, mixing with it Rabbit-Dung, Hen-Dung, and Aſhes, which, with the Help of Chamberlye, made together a rich Compoſition; then I directly ſowed two Buſhels of Barley Seed all over an Acre of this rough Land, and harrowed it plain once in a Place after the Seedſ-man; which as ſoon as done, I ſowed two Buſhels more of Barley all over the ſame Ground, that was fallowed by the Harrows twice in a Place, the ſame Way it was done before: Then I ſowed ſixteen Pound Weight of Honey-ſuckle Seed, and only harrowed it once in a Place acroſs the laſt Way, which filled in the Thoroughs, and laid the Ground all even; thus I finiſhed a one Acre Field, that was in this Manner laid down for good, to become a Meadow in time for feeding Cattle. And here I ſhould have publiſhed a Caſe, that a Gentleman ſent me, of converting a low wet grazing Ground into plowed Land, by way of Improvement, with my Anſwer to the ſame; but I have not Room. *N.B.* I anſwer Letters between *Michaelmas* and *Lady-Day*, provided Poſtage is paid to my Houſe.

CHAP.

## CHAP. II.

### *Of Barley, Wheat, &c.*

*THE Nature of Vale Land for Barley.*—In the large and fertile Vale of *Aylesbury*, as well as in moſt other low Grounds, their Earth is generally of a black and bluiſh Clay, or a marly dark coloured Loam, clear of Stones, which in Winter is very apt to ſtolch by the Tread of Cattle, and by the Waſh of frequent Rains that eaſily converts it into a muddy Conſiſtence, and in froſty Weather from a ſtiff Clot, it is preſently reduced into a ſhort crumbling looſe Body, which readily lets out the ſpiry Blade of new ſown Corn; alſo in this their low Situation, they are very apt to ſuffer by Floods, which ſometimes are ſo long retained on their ſtiff Soil, that the Vale appears almoſt like a little Sea, ruining their Grain, and rotting their Sheep: On the contrary, in the Summer Time, their open Fields are ſoon dried, and their clayey Surfaces become ſo hardened, as to cleave aſunder much more than any other Sort of Land, whereby their Barley in particular is often ſtunted in its Growth, and dwindles into a ſhort, lean, thin Crop, on their high, expoſed, ridged Lands; which at firſt was invented for the Security of their growing Corn againſt overflowing Waters.

*Time of ſowing Barley in the Vale.* — The Vale-Farmer thinks he runs a Riſque of the leaſt Danger, when he ſows his Barley about the Twelfth of *March*; for though, by this early ſowing, he is under the more Danger of being hurt by Floods and Froſt, yet is he alſo intituled to the Hopes of a moderate, moiſt Time afterwards, that may bring on ſuch a timely Head of Barley, as to cover and ſhade its Roots ſoon enough to withſtand a dry Sum-

Summer, and ſo enjoy a plentiful Crop at Harveſt, But if, to avoid the ill Effects of *March* Floods and Froſts, they ſhould defer ſowing their Barley till the Beginning of *April*, which they ſeldom do, then they are under no leſs Apprehenſion of ſuffering by ſucceeding Heats and Droughts; ſo that after plowing, ſowing, and paying Rent two Years together (which they here do when they fallow for Barley) without receiving any Profit, they frequently come off with half Crops. Now to prevent the great Loſſes that may thus happen to Crops of Barley, if ſown late in *April*, and even at the Beginning of *May*, obſerve the following Account, *viz.*

*A moſt excellent Receipt for increaſing Crops of Barley.*—Take one Buſhel of Barley, and boil it in ſix or more Pails of Water, till the Grain burſts: Strain out the Liquor, and give the Barley to the Fowls or Hogs; while the Liquor is hot, diſſolve in it three Pounds of Cryſtal Nitre, and a Quarter of a Pound of green Copperas in Powder: To which add one Quart of pure Soot, and as many Pailfuls of Water that drains from a Dunghil or Urine of any Sort, as will, when the Grain is put in, make the Liquor ſwim four or ſix Inches above it. Now obſerve, as ſoon as the Nitre and Copperas are diſſolved, and while the Water is hot, to pour it on three Buſhels of Barley Seed, into a Tub with a Cock and Tap Whips, and then immediately put in the Dunghil Water and Soot, as aforeſaid. Let the Grain lie ſoaking herein, from one Evening to another, when the Liquor muſt be drawn off, and the infuſed Barley laid in a Heap all Night, on a Floor to drain. The next Morning, with a Shovel, mix it well with powdered Lime, and carry it in a Sack to be ſown in the Field. The Liquor that is left will ſerve again with freſh Addition, and is admirable to water a Garden

Garden, or make a Tree grow to Perfection in Half the uſual Time, if judiciouſly applied; and thus, you may carry on your Sowing of Barley many Days, by as often renewing the Preparation I have here plainly given Directions for: And accordingly, by punctually obſerving them, you will, by the Bleſſing of God, certainly find the Barley to ſpread with large Blades, and be of a blackiſh, green Colour, ſoon after it appears above Ground; for, it is the Nature of the Nitre to agree ſo well with this Corn in particular, as to cauſe it to grow up into twenty, thirty, or forty Stalks, from one ſingle Root, which will ſo cover the Ground with their branching Tops, that the Wets and Dews will eaſily make a Lodgment, and the Roots likewiſe be ſo well ſecured from the Damage of Droughts, that, if no Rain happens for two or three Months together in the hotteſt Seaſons, there will be Moiſture here enough to carry forward the Growth of the Crop in Clays, Loams, and even in Chalks, Gravels, or Sands; beſides which, there is this good Property belonging to this Proceſs, that the Barley at Harveſt is generally all of one equal Ripeneſs, which renders it the compleateſt Sort, for making true Malt: By all which Management, if your Ground was in a fine Tilth, dry, and well dreſſed with good Manure, when the Seed was ſown, you need not doubt of having ſeven Quarters off an Acre.

*The Sort of Barley to be ſown in this Month.* By ſome, Barley is ſown the Beginning of this Month oftener out of Neceſſity than Choice: As when the Farmer, by Multiplicity of Buſineſs, can't get his Land into a fine Tilth Time enough, or that he has not eat his Turneps off before now, or is retarded through the Inclemency of Weather. In all which Caſes, the Rathripe, or *Fulham* Barley is now the propereſt to ſow, either in Vale or *Chil-*

*turn*. Lands, becauſe it grows quicker than any other Sort; for, though it is ſown late, it is early ripe, and will prove the beſt of Barley for Malting, after being once ſown in Loams or ſtiff Lands, which gives it a much larger Body than the ſandy Ground it came from: So likewiſe in Chalks, Gravels, and Sands, in Caſe you ſhould happen to be behind-hand in ſowing your Barley, which more particularly ought to be done, in ſuch hot dry Soils, ſooner than in this Month, you ought by no Means to neglect ſteeping the Seed in this my excellent nitrous Liquor; becauſe, at this Time of the Year, the Droughts are commonly more powerful, and will ſooner burn up the green Barley in ſuch dry Soils, if ſown in the naked common Way.

*The Opinion of a certain Virtuoſo, concerning ſteeped Barley.* "This I take, *ſays he*, to exceed the dry "Sort, in making ſtronger Malt: For as Nitre is "ſo eſſential to Vegetation, that it is its fundamental Principle, and the Grain by being therewith fully impregnated and ſaturated, when it "enters the Ground, immediately joins in Con"tact with that in the Earth and Air, which "cauſes it to ſhoot into many *extra* Roots and "Stalks, which ſerve (as a Reſervoir) to lodge "and retain the nitrous Salts, till the Corn increaſing in Growth, they are, by the alternate In"fluence of the Dews and ſolar Heat, ſo rarified "and exalted, as to inſinuate themſelves into the "vegetative Juices; and as the hot Seaſon advan"ces, theſe Salts become more and more fixed in "the Grain, by the Exhalation of the phlegmatic "Part of the Sap, which thus ripens the Corn, "and then leaves Plenty of a large full-bodied "Grain, diſtended and loaded with the aforeſaid "Matter; which conſequently, muſt yield a great"er Spirit (when malted) to the Liquor brewed "therefrom."

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*The Quantity of Barley Seed to be ſown.* On this Account, I ſhall obſerve, that the Quantity of Seed ought to be proportioned to the Nature of the Soil, Tilth, and the Seaſon of the Year. *Firſt*, as to the Soil: On ſtiff Loams and Clays, ſome will ſow, in the common Way, four Buſhels on one Acre, becauſe on this ſurly, cold Glebe, the Seed is very apt to bury, chill, and die; and therefore ſuch Land ſhould be aſſiſted with good warm Manure, as will enable the Barley to grow thick, and kill the Weeds, which, in ſuch ſour Ground, are very apt to get rampant, and deſtroy the Corn. On the Contrary, in many of the light, ſandy Grounds of *Norfolk* and *Suffolk*, they ſow but one or two Buſhels on an Acre, and, if they increaſe the Quantity of Seed, it is as the Land is heavier: Becauſe, as they ſay, their light, poor Ground is not able to carry more; for, if they were to ſow it thicker, ſuch Land would return an hopper-eared Crop at Harveſt, or in plainer *Engliſh*, a little Ear with a few Kernels.

*Secondly*, If a ſtubborn Soil happens to lie in a ſour Tilth, as it is very apt to do, there muſt be the more Seed ſown, to allow for a conſiderable Loſs, by the Cover that the clotty Part of the Earth will cauſe, and ſo deceive the Farmer, if he allows not enough to prevent this Misfortune. On the Contrary, when Land is in a fine Tilth, the leſs Seed will do; and this is one Reaſon why in ſandy Grounds they ſow ſo little Seed; for that in ſuch pulveriſed Tilths, hardly one Kernel miſſes coming up. *Thirdly*, If you ſow late, there muſt be the more Seed ſown, for it is a ſtanding Rule in Huſbandry, that, the later you ſow any Corn, the more Seed ſhould be allowed; becauſe then the Grain will never gather, branch, nor kern ſo well as the more forward ſown, as being drawn up ſo faſt by the powerful Attraction of the Sun, that

it will run a-pace into Stalk, and leſs into Corn; and becauſe the Fowls, in late Seaſons, live moſtly on the Grain ſowed then, as having little elſewhere for their Subſiſtance; and here they have ſometimes a long Opportunity to ſcratch with their Feet and dig up with their Beaks, the Barley Corns, before their Blade is ſeen above Ground, when a dry Summer directly ſucceeds the new ſown Grain, to the Deſtruction perhaps of Half the late ſown Crop; from whence I take the Opportunity to urge the Neceſſity there is of making Uſe of my invaluable Method of ſteeping the Barley Seed, which ſurely prevents the fatal Conſequence of ſowing late, by cauſing it to run into Branch in the drieſt Seaſons, and thence into many and large Ears of Corn: For the Obtaining of which, let this be always obſerved, that wherever four Buſhels of Barley Seed was uſed to be ſown, in the common Way, there muſt be but three Buſhels ſown of the ſteeped Seed; and ſo in Proportion for any Ground whatſoever, that there may be Room enough allowed for each Kernel, to make its many and ſtrong Branches or Stalks.

*To reduce a rough Tilth, and make it fine preſently for Barley.* Now in Caſe your Land lies rough and clotty, the ſpiky Roll I mentioned in laſt Month *(Page 17)* may be of Service to go before the Harrows for reducing at once the ſurly Glebe into a fine Condition; but where this new invented excellent Machine is wanting, then uſe the common Wooden Roll, and your Harrows directly after that, and ſow your Barley; but never roll it as ſoon as ſown, as ſome injudicious Men have done, and ſo bury great Part of their Barley Seed, but roll it ſome Time after, when it is about Half a Handful high; as I have more particularly treated of in my laſt Month: And what great Importance ſuch a ſpiky Roll is of, for ſuddenly

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reducing all ſtiff, rough Ground in a dry Summer, that Farmer muſt conſequently experience, very much to his Profit, who is furniſhed with ſuch a ready Conveniency.

*Sowing Barley Seed in* Chilturn *Lands.* For this, we plow our Ground into broad Lands of nine Steps broad each, by ſome called *round* Work, by which a Water-Thorough lies on each Side of it, and a ſmall Ridge or Riſing in the Middle: Here the Seedſman goes about a Yard off the Thorough, and ſows a Caſt, then returns the ſame Diſtance of the Ridge, and ſows another Caſt, croſſing the ſame Ground with his Throw, whereby it is twice ſown over, and thus again, on the other Side; by which Means the Seedſman goes twice up and down a broad Land, before he has done ſowing it; but the new Way of ſowing Barley in dry Loams or Gravels, *&c.* is to do it in a double, broad Land: That is to ſay, inſtead of our common Lands of nine Steps broad each, we make them eighteen Steps broad, and then there will be but Half the henting Thoroughs in the Field, which ſaves Time and Labour, and the Corn will come evener and better; becauſe the Grain is ſeldom ſo good in the Thoroughs, as elſewhere: Here, when the Seedſman begins to ſow, he proceeds in the Middle of each Land, and at every Step he makes a Throw on Half the Breadth; thus at two Throws he ſows the Breadth of a whole Land; and when, at the End, he returns and ſows it in the ſame Manner back again, in an oppoſite Way, by which he ſows the Land twice over. This Method is allowed to be the beſt of all others in dry Grounds, but, in wet Soils, the narrow Lands are beſt, becauſe, the more Thoroughs, the drier they lie.

*Sowing Barley in Vale Lands.* Theſe admit of four Sorts of Shapes, according to their Nature and

and Situation. *First*, In the Vale of *Aylesbury*, they always lie in one Posture of Ridge and Thorough, and are sowed at twice; the first Cast of Barley Seed is plowed in, and then immediately another is sown and harrowed in, to make it all come even. *Secondly*, In their low Grounds about *Rickmansworth*, they make their Lands eight Bouts wide, or four Steps and a Half broad for sowing Barley and laying it dry. *Thirdly*, In some Parts of *Middlesex*, they sow their Barley in four Bout-Lands, for the same Purpose. *Fourthly*, In some of the Eastern Parts of *Hertfordshire*, they plow their Ground into three and two Bout-Lands, to keep the Barley from being drowned, which they harrow so even, as gives the Scitheman Liberty to mow down the Corn almost as well as in level Grounds.

*A new Way of increasing Crops of Barley by sowing it in Drills.* This Method is lately invented for destroying the several destructive Weeds, that used to spoil many Acres of Barley; particularly, that called *Bodle* or *Gould*, which commonly, in sandy and other light Grounds, comes up in great and tall Branches, with their yellow Heads, notwithstanding the Earth before Sowing was ever so finely plowed, and which keeps Company with the Barley to the last, so thick as to defy the Weed-Hook or Hand for keeping it down, and is so common a Weed, that few sandy Fields are free from it. It is therefore, that they very judiciously, of late, sow their Barley in Drills or Furrows, in such Sands, Loams, Chalks, *&c.* as are clear of Stones, and will easily admit of this Operation by a most excellent three Wheel-Plough, which lets the Barley out of a Hopper, in a very regular Manner, into Drills, which it makes about one or two Feet asunder; and which by a small Alteration afterwards is to be drawn by one Horse, and made

made to ſerve as a Break, or Hough-Plough, for killing Weeds between the Rows of Corn, and moulding them up to a prodigious Advantage: Which Plough, as well as another juſt invented for doing the ſame Work, in low, wettiſh Grounds, I ſhall particularly deſcribe in my next monthly Book, and there recommend their moſt ſerviceable Uſes.

*To improve Crops of Barley by the Fold.* If, as ſoon as your Barley is ſown, you fold your Sheep on the ſame, it will cauſe it to branch, and grow faſter. But as this Huſbandry may meet with its Inconveniences, as well as be attended with Succeſs, I ſhall here relate the two following Caſes, which may be worthy your Obſervation, *viz.* A Farmer by me having had but a poor Crop of Turneps on a loamy Soil, that before had been but half plowed: When the Turneps were eaten off, he gave the Ground one Plowing and harrowed in his Barley, on which he directly folded: But he had no Barley in many Places, and but a ſmall Crop in the better Part. The Reaſon was, that, the Land being four and clung, the Barley Seed had not room to be buried deep enough by the Harrows, ſo that the Feet of the Sheep trod it out of the Ground, inſtead of treading it in; and this Misfortune was the greater for the dry Weather that followed after; becauſe, by this, the Seed was the eaſier diſplaced by the Thread of the Sheep; whereas, had it been a wettiſh Time, it had not been ſo much raiſed out of the Earth. The other Caſe was thus: At the ſame Time I had a Field of Turneps, that was a good Crop, which, as ſoon as eaten off, I gave it only one Plowing, and harrowed in my ſteeped Barley Seed, on a loamy Soil in *April*, and immediately folded on the ſame, till the remaining Part grew above my Shoes in this Month; and it proved an excellent Crop. The Reaſon was, that my Ground was made

made a fine Tilth by ſeveral Plowings before the Turnep Seed was ſown, which by houghing, and the great Cover of the Leaves, the Earth was kept in ſuch a hollow Condition, that the Feet of the Sheep helped to ſink the Seed lower, inſtead of treading it out of the Ground. Therefore, none ought to fold Sheep on their Barley, unleſs the Ground is in a good Tilth, and lies looſe; and then you will alſo avoid the common Danger of ſpoiling the Barley, by the Feet of the Sheep, while it is chipping or ſprouting, becauſe, when the Ground lies thus hollow, there is a ſufficient Quantity of Mould to cover and guard it from ſuch Damage. Likewiſe obſerve, that in Gravels, and other binding Grounds, if it is wet Weather when the Fold is over the Barley, the Grain will be ſo faſtened in by the mortariſing Nature of ſuch Soil, and the Feet of the Sheep, that a great deal will never come out; however, by taking Care not to fold in a rainy Time, you may, on ſuch Ground, carry on your Folding, till the Barley is five or ſix Inches high, and near ſpindling, with great Succeſs: But, for further enriching Barley Land, ſome, that fat their Sheep on Turneps, will every Day dig up thoſe which have been ſcooped by them, and feed their Store-Sheep with them every Night in the Fold, which theſe Sort will greedily eat after having been kept all Day on a ſhort Bite of Graſs; and thus ſuch Ground will be three Times dreſſed, once by the fat Sheep, next by the Store-Sheep, and *laſtly*, by the ſame after the Barley is ſowed; and indeed this is the beſt of Dreſſing, not only for making the Corn ſtand faſt againſt Storms of Wind and Rain, but alſo for cauſing a great Crop, and preventing its being damaged by Worms.

*Barley fed by ſome, and by others made Hay of.* On the Firſt of *May*, 1734, a Crop of Barley of my Neighbour's

Neighbour's was ſo rank, that he ſed it down with his Sheep (it being ſowed the latter End of *February*) and it proved a very great Benefit to it, for it ſhot ſo ſtrong afterwards, that it gathered into many Stalks from each Root: Yet is ſuch Management to be done with great Precaution, for though it may help ſome, it may ſpoil others; as for Example, if ſuch a Crop of Barley was thin, the Ground weedy, and the Land not in good Heart, the Weeds would probably have gotten the better of the Corn, and ſpoiled it; but where the Ground is rich, and the Land clean, dry, and warm, it may be ventured on, in this Manner, with a good Proſpect of Succeſs. Sometimes Barley, in wet, warm Seaſons, is ſo rank in this Month, that it is laid flattiſh, and then ſome will top it with a Scythe; others will mow it almoſt cloſe, and make Hay of it; but then it muſt be done before it ſpindles, otherwiſe you may endanger the whole Crop.

*Barley eaten by Worms.* The Winter 1735 being mild, the Worms lay in the Spring-time near the Surface, and deſtroyed a great Deal of Barley, by gnawing it juſt above the Root. My next Neighbour ſowed a Field with Barley early in *March*, that by the Middle of *April* was moſt of it devoured by Worms, and ſpoiled by them, and the Chill of a cold, wet Time, which brought him under the Loſs of Labour, Time, and Seed, and obliged him to plant the ſame Ground with Garden-Beans directly: Now this Damage was brought on the more, by his dreſſing the Land with Dung, which, being of a warm hollow Nature, preſently invited theſe Inſects towards the Surface for feeding on it; and then, meeting with the new ſprouting Blade of the Barley, it ſerved them as a delicious Food, which they greedily eat after a long Winter's Confinement in their deep Cells; and the

more, becauſe there was no other Vegetable, at this Time of the Year, in the ploughed Ground for their Subſiſtance, as it evidently appeared in thoſe Places where the Dung lay; for here the Corn was eaten, when at the ſame Time that eſcaped, which was not dunged; and therefore Sheep-folding, Soot, Lime, Horn-ſhavings, oily or greaſy Rags, or ſuch as had been ſprinkled with Urine ſeveral Times, or Tobacco-Sand, or Peat-Aſhes, and more particularly the Nitre, &c. with which the Barley Seed is loaded, are good Preſervatives, and much ſafer againſt the Damage of Worms and Slugs than common Dung. But this was not altogether occaſioned by the Dung, for there was another Cauſe no leſs fatal to the Deſtruction of the Barley; and that was a Lay of Clover, that this Field had been under two Years before, which naturally increaſed the Breed of Worms, for all Reſtings of Ground are as ſo many Friends to this Inſect; eſpecially in wet, flat, loamy Land, as this Field was. An Inſtance of this was plain to my Obſervation, in ſome ſandy Mud, that had lain three Years in the Side of a Hole, where Road-Sullidge run into by the Waſh of Rains, which I had emptied every Year, but, a ſmall Part of it eſcaping the Shovel, it became full of red Worms, the reſt being intirely free; therefore, many are ſo timorous on this Account, that they won't ſow Wheat or Barley in ſuch Ground, but a Crop of Oats firſt, which is leſs valuable, or Horſe-beans, that is leſs hazardous. As to Wheat, I have happily diſcovered a new Secret, for ſoaking it in a Liquor, that will effectually keep off all Damage by Worms, and at the ſame Time prevent any Loſs by Smut, &c. and which I intend to publiſh in the Month of *September*.

*Firſt*, Sr. *Foyne ſowed with Barley*. If you could not ſow this Seed with Barley in *March* or *April*, it may

may be done the very Beginning of this Month; and it may prove a good Crop, if Showers ſucceed in due Time; and for the better ſecuring its Growth, and making it come forward, you may ſow fifteen Buſhels of Coal-Soot over an Acre, as ſoon as the Barley and St. *Foyne* Seed are ſown, or you may clap your Fold upon it: But, of the Improvement of Barley, more in my next Monthly Book.

*Common Wheat, its Condition and Management in* May.— If Wheat looks yellowiſh in this Month, and continues ſo throughout the whole, it will never rightly recover that Summer; becauſe then it is on its Shoot or Earing, and paſt Hopes: But if it is ſick in the Beginning, and recovers before the End, it may chance to be a good Crop; for all Wheat ſhould may, or look yellowiſh in *April*, and be of a black Green in *May*: Or take it this Way; if Wheat holds its Colour throughout *April*, and this Month, there is no great Danger of a good Crop. If it thrives in *March*, it generally mays in *April*; if it thrives in *April*, it commonly mays in *May*. When it mays in *April* it is right, but wrong if in *May*; for then it ſhould, towards the latter End of the Month, thrive and ſhoot into Ear, inſtead of maying or yellowing; which is often cauſed for Want of the Ground's being in Heart, to enable the Wheat to withſtand the cold and chilly Seaſons. But, to be more particular, your forward ſown Wheat often grows ſo luxuriant, in the Beginning of Winter, as to ſpend itſelf too ſoon, and eſpecially, if followed with a mild Spring, which cauſes it to grow ſo rank, as to want Strength, in this Month, to carry it on, and then, in Courſe, it muſt have a ſickening Time to check it, in Order to make it ſhoot with the greater Vigour afterwards. Now there are two Extreams of Weather, that ſometimes happen in this Month, which prove fatal to Crops of Wheat: One is

Froſts, as it happened in *May*, 1734, when Hail-ſtones fell ſucceſſively for three Days, which being of a poiſonous, cold Nature, and very heavy withal, beat down and hurt the Spindle of the Wheat, and Stalks of Peaſe, making the latter red-headed, and cauſing many to die: This was a Seaſon ſo ſevere, that on the eighteenth Day the Icicles were ſeen to hang at the Eves of Houſes; but the poorer Sort of Wheat ſuffered moſt. On the contrary, at another Time, about the Middle of this Month, the Seaſon having been mild and rainy ſome Time before, the well-dreſſed Wheat and Barley ſuffered much, by their luxuriant Growth; inſomuch that a great Deal fell, before it was ſhot into Ear, which proved of very ill Conſequence to the Farmer, becauſe vaſt Quantities never did riſe again, and did not half kern, eſpecially in the Vale Grounds, which are the richeſt Soils; and this Misfortune proved the greater, where the Wheat was youngeſt and weakeſt in Stalks; for when this happens to Wheat at an older Growth, it is often ſtrong enough to get up and recover. When Wheat is rank too ſoon, it has tempted many to mow or feed it, in Order to bring it under a more regular Growth: But as this Management is better or worſe, according to the Nature of the Grain, Land, and Weather, and that there is a great Deal to be ſaid about it, I ſhall defer it for a more proper Month. But, before I leave this Subject, I muſt obſerve, that when Wheat is ſown, at a right Time, in a proper Soil, and the Seaſons of the Year prove favourable, there are many Acres that never may or ſicken at all, yet hold their Growth and Colour from the firſt to the laſt, in right Order, then ſuch Wheat is in its higheſt Perfection. About the Middle of this Month, 1736, the Wheat in the *Chilturn*, high Ground, eſpecially, looked ſhort, yellowiſh, and ſick, by

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Means of a very long cold dry Seaſon, which ruined many Crops that were not well dreſſed, becauſe the Ground had not Strength enough to make it run and rally again, as that in Heart did, and recovered. There was a Field of latter ſown Wheat, which in the Beginning of *March* looked at ſome Diſtance, as if nothing grew in it; yet the Ground being clear of Weeds, and in tolerable Strength, and the Wheat not having ſpent itſelf in Winter too much, in the Spring it gathered to that Degree, that ſome of it had fourteen Ears from one Root, as it grew in a loamy, gravelly Clay, and proved an excellent Crop at Harveſt.

*Buck*, *Brank*, *or* French *Wheat*, *its Nature and Uſes.* It is the Opinion of ſome, that it does moſt good in Clays and clung Grounds to hollow them; others ſay, that it is beſt uſed in dry, binding Gravels or Sands, to keep the one looſe, and the other moiſt; but, in ſome of the ſandy Lands about *Goddalmin*, they dare not ſow it, leſt it make the Earth too light for common Wheat; yet in heavy Sands, ſandy Loams, Gravels, and ſuch Sort of light Grounds, it is certainly beſt ſown, either to plow as a Dreſſing, or for Seed. In Chalks it is improper, becauſe it looſens them too much. In ſtiff and wet Lands, it is apt to rot both in Root and Ear, as being itſelf a very ſucculent Plant, and of a tender, cold Nature, being eaſily hurt by ſome Winds, Lightning, and Froſts; and therefore warm light Soils ſuit it beſt, and, in all, it is a very great Killer of Weeds, where it grows thick, as it commonly does in Tilths, though you ſow but one Buſhel on an Acre, and is found by many to anſwer that great End, which all Farmers endeavour after; namely, to reap a great Advantage for a little Charge. I am the firſt, that have ſown it in our Parts for a Dreſſing, though it has been ſown in *Norfolk*, *Suffolk*, *Surry*, *Kent*, and *Berkſhire* many

many Years, and is now more and more propagated: As I live twenty-ſeven Miles from *London*, it is a great Expence to have Manures from thence, for ſometimes Soot is a Shilling a Buſhel, ſo that 25 *s.* is the Charge of dreſſing a ſingle Acre well, when Half a Crown will do in *French* Wheat, and yet this will kill Weeds, when Soot will nouriſh ſome; the Wheat-dreſſing will laſt three Years, when the Soot will laſt but two; the one is alſo the more certain than the other, for, in dry Seaſons, the Soot, by its ſulphureous Quality, will burn up a Crop of Wheat or Barley to a great Degree, when the *French* Wheat will remain a ſure and certain Promoter of Vegetation, by its moiſt, hollow, fertiliſing Nature: Again, Soot, when it is laid, to the Quantity of twenty-five Buſhels on an Acre, forces ſo vehemently either Graſs or Corn, that, after two Years, it leaves a Poverty behind it, which this is ſo far from doing, that it is almoſt a Dreſſing the third Year, provided it be a full Crop at firſt, and plowed in at full Bloom, when the Stalks are fulleſt of Sap. This Grain is one of the greateſt Drawers of the Earth, and has returned four or five Quarters of Seed from one Acre, which is excellent for feeding Hogs, and Poultry. In Blooming-time, when this is to be plowed in, it is very ſerviceable for ſubſiſting Cattle in a little While, who will tread it down, and make it the fitter for this Purpoſe. You, that dreſs your Land by Sheep, may fold them in another Ground, while this is provided for, and that without any Riſque of your Cattle's breaking out, into your Neighbour's Fields, for here is Meat in Plenty. So, when your Teams are all buſy, in ſome Ground there needs but one Plowing, to harrow your common Wheat in, on this *French* Wheat: It may be ſown in *July* or *Auguſt*, for Cattle to graze on it in *November*, or ſooner. In

*Shropſhire*

*Shropſhire* they grind *French* Wheat very fine, and make thin Cakes on a Back or Bake-ſtone, which is two or three Feet Diameter, on which they put a Sort of Batter made of this Flour, Milk, and Yeaſt; and when it is turned and done enough, they butter and eat it, drinking Butter-milk with it; this Cake is called *Jannock* or *Crumpet*, and is what old *Parr* of this Country eat all his Life: It feeds People to a great Strength and Stature.

*The Culture of* French *Wheat.* My Field was a gravelly Loam, that had a Crop of Oats laſt on it, and, on the Tenth of *December*, I plowed it with the Wheel Fallow-Plough into Broad-lands, which I let lie till the Beginning of *March*, when I harrowed it plain, and then directly hacked it a-croſs with the ſame Plough. In this Poſture it lay till the Seventh of this Month, and then I plowed it again, and ſowed rather above Half a Buſhel of Seed on the rough Ground broad-caſt, and harrowed it in once in a Place: When this was done, I immediately ſowed my other Half Buſhel, and harrowed a-croſs twice in a Place; by which Means I haled or covered it from the Fowls, and ſecured it better from the ſcorching Heats, than if it had been harrowed firſt, before any was ſown. If you ſow this Seed, to plow its Crop in, for a Dreſſing to common Wheat, then you ought to ſow it the Beginning of this Month, that you may have Time enough to plow it twice or thrice, which they do in ſome light Grounds, in Order to mix it well after it has firſt lain and rotted; but where it is to have only one Plowing in, then it may be ſown the latter End of this Month. In ſome Parts, in their ſandy Land, they plow it in with a Wheel-Plough ſhallow, and then immediately a Foot-Plough follows, and throws up a ſecond Mould or Sand upon that, and then harrow in their common Wheat, to

give

give it a deeper Bottom. Some, to have a Crop of this *French* Wheat, will make a Fallow and Dung for it, as for other Wheat. If it is ſown for Seed, it may be done the latter End of this, or in all the Month of *June*; if Ground lies low and wet, it may be ſown in two, three, or four Bout-lands; or it may be ſown with the three Wheel Drill-Plough, and horſe-houghed at ſeveral Times, and thus it will make it grow to a great Height, and produce Abundance of large Seed, if ſown at

Feet aſunder in Drills, which this excellent Plough makes, and at the ſame Time drops its Seed in the ſame out of a Hopper, in a moſt regular Manner, which afterwards muſt be covered by the Harrow: This Operation, though it is done for getting a Crop of Seed, yet, by this drilling and houghing Method, the Ground is finely prepared for a Crop of common Wheat to follow immediately this *French* Wheat, by plowing and ſowing the ſame Ground croſs-ways, in four-thorough Stitches, or in Drills made in the laſt Intervals, and that without any Manner of dunging or other dreſſing; for the Earth being firſt made fine, and houghed up to the Rows of ſuch Wheat, exceeds all Yard-Dungs whatſoever. As to the cutting, getting out of the Seed, and houſing this *French* Wheat, I intend to give an ample Account of it in the Month of *September*.

*The Culture of Woold or Weld.* This Month is a proper Time for ſowing Weld among *French* Wheat: It is a Vegetable that is carefully cultivated by many Farmers of late in their light Soils, for theſe beſt agree with it, and though it grows well in dry Loams, Gravels, and ſandy Loams, yet of late it has been found to flouriſh on chalky Bottoms, if the Seaſons be kind; That is to ſay, if the Summer it is ſowed in be dry, and the next a wet one: But it beſt of all agrees with dry, freſh Ground,

Ground, I mean where artificial Graſs grew two Years before, and has had one Crop of Beans or Peaſe firſt off the ſame Land. Now the Reaſon why they ſow Weld and *French* Wheat together is, becauſe there is the longer Time to get the Earth into a fine Tilth, for both theſe Seeds require that in particular; it is on this Account therefore they ſow Weld and *French* Wheat together the latter End of this Month. As ſoon as a Buſhel of the latter is ſown broad Caſt, and harrowed in, they ſow three Quarts of Weld-ſeed on one Acre, and harrow it in once in a Place, or twice at moſt, with light Harrows, for this is a ſmall Seed, and will eaſily bury. The firſt Year they mow the Buck-Wheat off, and the next Year, in *June*, they pull up the Weld, and manage it as I ſhall ſhew in the next Month; and thus they will grow well together, becauſe the Buck-Wheat kills the Weeds, and keeps the Weld from the Damage of Droughts. But this, like Turneps, is ſometimes ſpoiled by the Slug and Fly in its Infancy; to prevent which, I intend likewiſe to make known a Remedy in *June* and *July*, that will effectually do. The Year 1738, a Load of theſe Stalks with their Roots was worth ten Guineas to the Dier for the yellow Colour. Weld will alſo grow among Oats, or Barley, ſown in *March* and *April*, but not ſo well as with the *French* Wheat. Its of a hardy Nature, for it will ſometimes grow on a courſe Tilth: I mean where Oats are ſown on only one Plowing, this if ſown with them will very likely grow if it is fine Weather at that Time; but then the Weeds ſhould be carefully taken away, for as the Weld has but a ſmall Root, its much endangered by them.

*Cole or Rapes.*— Theſe that were ſown in *July* or *Auguſt*, or *September*, may be fed 'till the Beginning of this Month, with Sheep, Cows, or Bulls, and the ſame Land fallowed directly for Turneps

or Wheat. Theſe afford the Farmer a vaſt Opportunity of Profit, for this, like Rye, may be fed in the Spring, when Graſs and green Corn cannot; but the Cole or Rape exceeds the Rye, in that it may be fed earlier in Snows and near as late, for theſe will ſuffer themſelves to be eat down two or three Times, and quickly recover again, which cannot ſo well be ſaid of Rye. The Roots of theſe, being of the Cabbage Kind, draw very much Nouriſhment from a rich Ground, that forces them on, and gives them a new Head in a little Time, which again returns the Dung and Stale of the Sheep, to the great Enrichment of the Land and Profit of the Owner, who by this Means may keep his Money at Home, which otherwiſe muſt be expended in Dung, Soot, Aſhes, Horn-ſhavings, Rags, and other chargeable diſtant Dreſſings, that are not ſo good and natural to the Land as this of Sheep. But as the Months of *July*, *Auguſt*, *September*, are the propereſt Times in the whole Year for ſowing Cole Seed; I ſhall enlarge no further on this Head at preſent, but defer it till then, at which Time I ſhall oblige the World with an effectual Method to ſecure it againſt the Fly and Slug, which are mortal Enemies to this valuable Vegetable while in its ſecond Leaf.

*Rye.*— Your Rye that was ſown in *Auguſt* or *September*, is now eaten off, and your Ground in ſome Meaſure dreſſed with the Dung and Stale of Sheep or Cows, which makes ſuch Land be the readier for another Crop. Some therefore will plow up and fold the ſame with Sheep, in order to get a Crop of Turneps or Wheat.

*Turneps.*— You that Deſign to ſow your Field with Turneps in this Month, I will ſuppoſe you do it, either to eat off forward with Sheep, in order to ſow the ſame Ground with Wheat; or elſe to pull and ſell them in *Auguſt* or *September*, otherwiſe

wiſe its too ſoon to ſow them for a Winter Crop, becauſe they will grow hollow, hard, and ſtringy, before the proper Time of eating them with Sheep, unleſs you intend to eat the large red Turnep in *October* and *November* with horned Beaſts. In order therefore to have the Turneps in full Plenty, and to make them grow large and quick: Firſt and principally, let your Ground be well dunged, folded, or limed. In the next Place, the right Sort of Turnep ſhould be reſolved on. If for an early feeding or pulling, the *Dutch* white flat Turnep is a good ſweet Sort, that will be ready to draw in eight or ten Weeks Time, if the Weather is propitious; in order to which, ſow two or three Pounds of Seed on an Acre, and harrow it once in a Place, without any Pole on the Harrows, that they may be as light as poſſible, and it will prove a better Way than to harrow the Seed in with a Buſh-harrow or Hurdle. But with us there are ſeldom any Turneps ſown in this Month, becauſe, as we feed Sheep with them, they will come too ſoon for a Winter Crop, and then they won't be near ſo ſerviceable to the Beaſt, as the late ſown more young and tender Sort; for which Reaſon we ſeldom ſow them before the latter End of next Month. Turnep Seed may alſo be ſown out of the three Wheel Drill-Plough in Drills, which it makes to a great Advantage, at two or three Feet Diſtance each Drill, becauſe here they may be allowed a large Aſſiſtance of houghed Earth to their Sides, the Weeds more eaſily deſtroyed, and the Turneps better pulled, to be eaten clean up in another Place. In this Month you may alſo ſow the long *French* Turnep, called *Navews*, that are much of late in Uſe for Soops, *&c.*

## CHAP. III.

### *Of* Weeds *and their Cure.*

ALL Authors that have wrote on Weeds (as far as I can learn) have left the particular Deſtruction of many of the worſt of them to be found out. And therefore I ſhall here endeavour to make known the beſt Ways of doing it in the common Huſbandry of ſowing Grain broad Caſt, or by ſtraining it out of the Hand, which is ſo abſolutely neceſſary; becauſe in the large Vale of *Ayleſbury*, and ſome others, as alſo in many Sorts of ſtony, hilly, clayey, and hurlucky Grounds, neither Drilling, nor any other Way can be uſed. And although the Weed Hook and Hand are the moſt common Inſtruments for weeding Corn, that is thus ſowed promiſcuouſly, yet both in this old Way of Farming, as well as in the new Drill Way, the Plough and ſome other new Machines are certainly the beſt weeding Tools of all others, as I ſhall hereafter ſhew.

*Of two new invented Weeding-Ploughs, the Sheim Break, Niget, &c.*—It was in the Year 1737, about eighty-five Miles from *London*, that I firſt ſaw the three Wheel Plough, which, for its great Uſes in multiplying Crops of Grain, Turneps, and artificial Graſſes, and killing of Weeds, deſerves Admiration, and to be made uſe of wherever the Ground will admit of it. The ſecond is alſo a very ingenious Invention, to ſupply a Foot Plough, as the other does the Wheel Sort: They are both made to drill Corn, Turnep, and Graſs Seeds out of a Hopper; and with a little Alteration, will very expeditiouſly, and in the cheapeſt, ſureſt Manner, deſtroy all Sorts of Weeds in the Intervals, beſides keeping the Ground in a moſt fine Tilth, to ſow a ſuc-

a ſucceeding Crop; inſomuch, that by the Help of theſe, Land may be ſown, and Crops had every Year, without any Danger of breeding the wild Oat, or any other Weed, which would certainly happen, if it was conſtantly ſown in the common Way without fallowing. The Sheim Break, or Niget, have alſo their Share in extirpating Weeds, as well as the ſeveral Sorts of Houghs, which are all of ſo late an Invention, that but few Farmers are now in Poſſeſſion of them: But their great Importance will certainly ſpeedily bring them into Uſe more and more, becauſe they may be ſo managed, as to ſave the Expence of all Manner of Manures, or Dreſſings, and perform many other valuable Matters, that are too tedious here to enumerate; but I intend to be more particular in the Account of them in next Month.

*Curlock or Charlock.*— This is one of the commoneſt Weeds that grow among Corn, Turneps, *&c.* in Fields, and of ſo hardy a Nature, that where its got to a plentiful Head, its very difficult to deſtroy it, becauſe its Seed has ſo much Oil in it, as enables it to withſtand one Winter and Summer Fallowings. In wet warm Seaſons it is, like moſt others, moſt predominant; ſo that about the Middle of this Month, it has provoked ſome to employ many Hands to pull both the yellow and white Sort up by their Roots; you may give it to Sheep, who will greedily eat their Leaves and flowery Heads. The yellow Sort grows in moſt Grounds, but the White, which is the moſt pernicious, chiefly infeſts the lighter Lands, and is not near ſo common as the other. There has grown ſo much of the yellow Sort in many Fields of Oats, which have ſo out-ſhot the Corn, as to oblige the Owner to get their ſeedy Tops mowed off, to prevent an After-Damage from their Seed, and to give the Sun room to nouriſh the Oats the better. Others have

have uſed the five Foot long Weed-hook, and ſix Feet long Pea-hook to ſtrike off their Heads, it being an endleſs Piece of Work to pull them with their Hands, where theſe Weeds are vaſtly thick. This Seed, which very nearly reſembles the Turnep Sort, and is like it both in Leaf and Flower, is undoubtedly propagated with Turnep Seed, that it often grows amongſt, and therefore Farmers ſhould be truly nice in making Uſe of clean Seed, for a Turnep Crop. Curlock ſeldom grows among Wheat, but much among Barley, Oats, Peaſe, *&c.* where it does a great deal of Harm, by its branching and choaking the Corn, and drawing a conſiderable Nouriſhment from the ſame Earth, that ſhould be expended in forwarding the Growth of a large Crop: It moſtly flouriſhes in Tilths and well dreſſed Grounds, but does not affect ſtiff and watery Soils: It is beſt killed, by making a Summer-Fallow of the Land, and by ſowing the ſame, the next Summer after, with a Crop of Turneps.

*Wild Poppy, by ſome called red Weed.*— It chiefly grows in white and gravelly Grounds, but is often ſeen in Loams, and ſome other Earths. Its a very ſucculent Weed, that draws the Ground much, and robs it of thoſe nutritious Salts which ſhould fertilize the Roots of Corn: It runs up in large green Bunches, and therefore is beſt drawn by the Hand in this Month, for the Weed-hook is not proper here: Its Roots, Stalks, and Leaves make an excellent Hay for tame Rabbits, as being both of a healthy and fattening Nature: Their Flowers or red Heads are alſo ſerviceable in making a ſalubrious Syrrup: Its moſtly occaſioned by too fine a Tilth, and when the Corn is ſown in a dry Seaſon, which makes heavy Plowing, and a moiſt Seaſon its beſt Prevention. But a certain Farmer took a Method that I never knew any other do, and that was, becauſe he thought it too tedious a Work to

pull

pull it up by the Hand, he turned his Hogs into his Wheat the very beginning of this Month, and they preferr'd the poppy Stalks to thoſe of the Wheat.

*The red and white Dock.*— This Weed runs into the Ground like a Radiſh; as to the Shape, Depth, and Bigneſs, it has a bunchy tall Head, that contains a great deal of Seed, and does much Miſchief, where they are ſuffer'd to encreaſe, which is eaſily done, not only by their Seed, but by letting any Bits of their Roots lie on the plowed Ground; where, though they have lain ſome Months in a ſhrivelled Condition, yet if they are mixed with the Earth, they will grow again. Some ſay they are good for Nothing; others, that they are very ſerviceable in Diet-Drinks for cutaneous Diſtempers. In this Month their large Leaves and Stalks afford a good Handle to pull them up by. Some will draw them from among their Corn, but then they ſometimes do a great deal of Harm; becauſe the Roots of the Grain are apt to come up with them, therefore others will do this Work in the Fallow-Seaſons, by following the Plough, and digging them up in the Thoroughs it makes: Others, when a Field is under Clover, or any of the artificial Graſſes, will haul them out; but whenever they are weeded by pulling, it muſt be done when the Ground is pretty wet and looſe. About *Enfield*, they uſe a clever Inſtrument for this Purpoſe, having a wooden Handle, let into a Socket of Iron, with two Prongs of the ſame, fixed very near one another, and a ſmall Foot-Iron, jetting out on one Side their Top, which being forced into the Ground, very dexterouſly eradicates a Dock at once.

*Fern and Ruſhes.*— Theſe are ſometimes a Foot or two high in this Month, and hurt both Corn and Graſs. To kill the Fern, one mowed it in *May*, and twice the ſame Summer afterwards; another whipt

whipt and beat it; others, have plowed up a Graſs Baulk, carried away its Surface, and plowed the ſame Ground again for Corn: But theſe Practices only check'd it. In a certain Park this Weed was killed by plowing the Ground ſeveral Times one Winter and Summer, till the Earth was got fine; and then in *Auguſt*, the Owner ſowed the ſame with Rye, which fed the Deer the next Year; afterwards by plowing and ſowing artificial Graſſes, and rolling the Ground at Times, he deſtroyed the Fern. But as Fern grows among Trees and other Places improper for uſing the Plough, there was a Role invented, of a very large Size, to kill the Fern, and it had the deſir'd Effect: This Role was made with narrow Oaken Planks, two Inches and a half thick, faſtened by a wooden Pin, on three Wheels, that have only four Spokes to each Wheel. The Diameter of this hollow Role is five Feet ten Inches, and its Length above ſeven Feet, through the Middle of this an Iron Spindle or Axle-tree is faſtened, to which the wooden Sharps are fixed to draw it by with two, three, five, eight, or ten Horſes, according to the Weight you put into it; for the Inſide is made to hold Stones, Gravel, or other ſuch ponderous Bodies, to make the greater Preſſure; and though this Weed has been found to run more than eight Feet into the Earth, yet in two Years the Role has killed it. It will alſo cruſh down Mole-banks, Ant-hills, and Caſts of Worms, and level Graſs-Ground the better for the Scythe. It has been obſerved not to grow any more the ſame Year, if it is mowed on *Midſummer* Day. The Ruſh that moſtly infeſts wet Grounds, is check'd by ſowing Coal-Aſhes, Lime, Soot, and Peat-Aſhes.

*Wild Oat.*— This Weed is notoriouſly known to be a moſt pernicious one, by Reaſon of the great Difficulty that attends its Extirpation, and likewiſe

wiſe on account of its eaſy Increaſe, for this will grow amongſt moſt Corn, and ſcatter its Seed before the Grain is ripe, nor will it yield to any one Year's Plowing of the Ground, becauſe of its ſeveral Skins and hardy Nature. On which account it ſurpaſſes moſt others, as is plain from its growing, in Plenty, on breaking up Meadow Ground that has laid under Graſs ſome Scores of Years; for many Seeds of Weeds will withſtand the Culture of the Earth, and the Severity of the Weather, much longer than the Seeds of Corn or Graſſes, inſomuch that by the Toughneſs of their Coats, and their ſulphureous Nature, they have been proved to lie unhurt in the Ground, more than the Age of Man; which I think is enough to confute the common Opinion, that ſome Ground naturally breeds Weeds, without their Seeds being before in the ſame. And why wild Oats grow moſt in Ground that is conſtantly ſown with Corn, I think may be accounted for, by allowing that ſuch Seeds, if but a few at firſt, will increaſe the more by often mixing them with the Plough, and giving the Earth no Opportunity for their Ruin. The beſt Remedy, I know of, in the common Huſbandry, is after a Summer Fallow to plow the Ground ſeveral Times for a Crop of Turneps, or to have Turneps twice together: But above all others, the Plowings or Breakings between the Drills of Corn, Turneps, or artificial Graſſes will certainly and intirely deſtroy the Breed of wild Oats in a little Time. Before I conclude this Article, I cannot but obſerve the Opinion of a certain Perſon, who believed that thoſe Oats eaten by Horſes, and dunged whole, produce a wild Oat, by reaſon of the Damage they receive from the Body of the Beaſt: If this be true, it is not to be wondered at, if they grow in great Plenty, where ſuch Dung is laid; In the Vale among their random ſown Horſe-

beans, the Sheep deſtroy the wild Oats that Year, by feeding among the Beans, even in Bloſſom-Time.

*Crow or wild Garlick.* This ſometimes runs up as high as the Wheat, with Heads and Seeds ſomewhat like Onions, but not ſo large; it chiefly grows among Wheat and Barley, and not ſo much among Oats and Peaſe, at leaſt it is not ſo much minded in them, as in the other two. It is ſuch an abominable ſtinking Weed, that when the Wheat is at Market, and this Seed perceived to be mixed but in a ſmall Degree with it, the Buyer commonly calls it the *Devil* of a Weed. One of my Days-men told me, that he and another, as they were weeding of Corn, eſpied ſome of the Crow Garlick, which ſo much reſembled young Onions, that his Partner ſaid he would ſit down and eat his Bread and Cheeſe with a few of them; accordingly he cut about ten cloſe to the Ground, but it was not long before they began to ſwell the Man, and forced him home as faſt as he could go, where happily his Wife gave him a Doſe of Phyſic that ſhe had by her, and ſaved her Huſband. This Weed grows in many Grounds, but chiefly in the ſtony, clayey Soils, and is beſt killed by Winter Fallowings, frequent Plowings, and Turnep-Crops. The Seed of this Weed clogs the Stones of Mills, ſo that it is very hard to clear them of its Flour, 'till the next Summer dries it quite up.

*Melilot.* Is a Weed that grows among Wheat and Barley, but moſtly in Peaſe, Oats, and Beans, and that both in Vale and *Chilturn* Lands, where it comes up much like Lucern Graſs, about two Feet high with a yellow Flower, and a black Seed like Trefoil. If its Leaf or Seed is rubbed, it will ſtink the Hands for three or four Hours, and is ſo hateful to Horſes, that they refuſe the Oats it grows with. It is generally found in ſtony Clays and

and wettiſh Grounds; which if croſs cropped, by too often Sowings, will increaſe this horrid Weed very much. Its Remedy is the ſame as for Crow Garlick. Both this and the Garlick are ſuch offenſive Vegetables, as oblige ſome Farmers to weed it out, to prevent its Damage by the Cow's Milk in Cheeſe and Butter, as I have before obſerved.

*Gould.* This is the commoneſt and moſt pernicious Weed of all others in ſandy Lands. This Summer, 1738, being a wet one, the Gould got ſuch a Head among Barley, eſpecially, that there ſeemed to be as much Weed as Corn in ſome Fields. Many of their Sands, ſandy Loams, light brick Earths, and ſuch Soils are hardly ever without its Roots. It is one of thoſe Weeds that cauſe a Deſpair of deſtroying it, where it has got but a tolerable Poſſeſſion, I have obſerved its Growth, in vaſt Quantities of Ground, where its great high Bunches with golden Heads like a Marygold ſhew themſelves, at a great Diſtance. There are four Sorts of it that infeſt Corn Fields, as the white, red, blue, and yellow, but the laſt is the common Weed. To check then this fatal Deſtroyer, ſome lay down the ſame Ground, with artificial Graſs; others get a Crop of Turneps, as often as they well can on it; others ſow Rye inſtead of Barley, for this over-tops it. But, to kill it quite, the beſt Way is to ſow the Corn in Drills, and then plow and clean the Intervals, with that and the Break. About *July* 10, 1738, I ſaw the blue Sort with many round hard Stalks, three Feet high, among Barley, Oats, and Thetches, in a gravelly Loam.

*Horſe-Gould.* Is a general deſtructive Weed, and moſtly ſo in Wheat: It comes up in a fine Tilth, and flouriſhes moſt by a wet Seaſon, attended with a cold Spring, for then the Weed is apt to get the better of the Corn, as being the more hardy

Plant: It will keep Company with the Wheat 'till the Harveſt, and then is about half the Length of the Grain Stalks; ſhedding a great deal of its flat Burr-Seed in that Time, for this Weed grows ſo thick, that it is impoſſible to weed it with the Hand or Hook; therefore ſome have attempted to eat it off with the Wheat, by their Sheep, and failed; for when it is old, as commonly it is when the Time is for doing it, the Beaſt does not care to eat it, becauſe it is then bitteriſh: But my next Neighbour turned his Sheep in full early, which eat up both Wheat and Weed; the Conſequence was, that the Earth being a Loam, and a wet, cold Time happening, while it was thus feeding, the Weed recovered, and ſpoiled moſt of the Crop of Wheat. This yellow headed Weed grows chiefly in ſtiff Lands and Gravels, both in the Vale and *Chilturn*.

*Wild Borrage or Cats-tail.* There are two Sorts that bear this Appellation, the blue and green, but the blue is the commoneſt and worſt. This ſhews itſelf but once in three Years, and then in the *Lent* Crop of Peaſe or Oats, moſtly in Chalks, Gravels, or Sands, with a large Head, and down-right Root; for it does not affect Tilth-Earths. Between *Hazlemere* and *Godalmin* in *Surry*, I ſaw a large Field of Oats ſo over-run with this blue Weed, and the red Poppy, about the tenth of *June*, in a ſandy Loam, that I could hardly ſee, at a ſmall Diſtance, any other but theſe two fine coloured Weeds, which made a pretty Show to the Traveller, but a woeful one to the Farmer: In the old Huſbandry, it is beſt deſtroyed by pulling up with the Hand in wet Weather, or by the Fin on the Share, or by following the Plough with Mattocks: It is called Cats-tail in *Hertfordſhire*; in *Surry*, wild Borrage.

*Hogweed.*

*Hogweed.* This is the worſt and commoneſt Weed that infeſts our *Chilturn* Fields, becauſe it draws away much Nouriſhment from the Grain, and takes up a great deal of Room both above and below the Surface, to the great Damage of all Crops of Corn that grow among it. It roots about two Feet down, and more upwards in Stalk; its large Head is firſt green, then white, next yellow, and at laſt brown and ripe in Seed, which is a flat Sort, ſo much like that of the Garden Parſnip, that it is difficult to diſtinguiſh it by Sight. No Plowing nor Fallowing can deſtroy this, nor will it yield to ſowing the Ground with Clover or other Graſſes, or with Turnep Seed, and their common Houghing: Our way is to weed it in this Month or next with the Hook, but this only checks it from feeding, and cauſes the Weeder to do a great deal of Harm with his Feet among the Corn. To deſtroy it, it ſhould be dug up by ſeveral Men following the Plough with their Mattocks, for the Roots ſhew themſelves very plain in the Furrow, and then their Pieces muſt be carried off the arable Land, leſt they ſhould grow, or be laid on the ſame for Sheep to feed on directly, which they will greedily do; and not only Sheep, but Horſes, Cows, Hogs, and Rabbits, are great Lovers both of their Roots and Stalks, and will fatten on them, if plentifully ſupplied, whilſt they are green.

*Cammock.* There are two Sorts of this ſtinking Weed; the one has a Honey-ſuckle Head, the other ſpires up with a ſort of graſſy Leaf above a Foot high, and ſmells ſtrongeſt: It branches and roots like a Honey-ſuckle, but much more, and is a great Spoiler of Corn: It grows in Patches, in Loams, Clays, Gravels, and in ſome ſort of white Grounds. Their Cure is chiefly by the Mattock, to dig up their Roots deep, and break the Ground well

well to come at them, carefully carrying away all the fibrous or ſtringy Parts off the plowed Ground: Their largeſt Roots are ſo ſtrong, as ſometimes to ſet ſix Horſes.

*Honey-ſuckle.* I mean the red Sort, which when old, like the Cammock, will try the Strength of a Team of Horſes, to break their Roots; and therefore it ſhould excite the Care of Farmers to prevent their Growth, by giving the Land frequent, deep, and clean Plowings: To this Purpoſe, the excellent Method of bouting ſtiff Lands, and bouting off the laſt Bouts, prevents the Breed and Increaſe of the Honey-ſuckle: And it is on this Account that the two Horſe ſmall Farmer ſuffers much, becauſe he is not ſtrong enough to perform this Work, nor to prevent the Breed of this, and ſome other tenacious potent Weeds. The Honey-ſuckle is ſo much planted in ſome Fields, that it has tempted ſeveral to let it ſtand for an entire Crop of Graſs to feed Cattle, or to mow for Seed, which in ſome ſwampy Grounds is ſerviceable; for though it is like Clover in Head and Root, yet it won't hove the Sheep or Cows like Clover; yet, if you let it lie three Years together, it is wrong, for then it will be apt to run its Roots too far into, and about the Ground, and ſo become a laſting Enemy: Its Cure is to chalk the Land, and to dig with the Mattock, or to give it deep and often Plowings, eſpecially at Fallow-time in a dry Seaſon.

*The Thiſtle.* Is ſaid to be an Indication of good Land, but where-ever it happens to get Poſſeſſion, it is no welcome Gueſt, for it does its Share of Damage among Corn, proportionable to its Root. It is moſt common in Vale rich Lands, and too often in our *Chilturn* Grounds, where in both, if it is let ſtand to Seed, the Winds will carry its light Flew to great Diſtances: This I know a great Farmer

ſo

ſo careful to prevent, that he makes his Men with a Mattock, or with the Iron-Thiſtle paddle every Year, to deſtroy them in the Lanes, near his Fields, leſt its feathery Seed ſhould blow into them and grow. Its Cure is often and deep plowings, chalking the Land, and ſowing it with Clover; or better by a Man's following the Plough, and digging the Roots out of the Furrows. I knew a certain Man to be at eight Pounds Expence the firſt Year, five the next, and three the Year following, to paddle up Thiſtles in the ſame Meadow feeding Ground, and by this Means overcame them.

*Ragweed.* This is a tall bunchy Weed, that has many yellow Heads or Flowers, ſomewhat like the Gould; it chiefly infeſts Meadows, ſome whereof I have ſeen over-run with it in *Auguſt*, when it is in its full Perfection: This comes meerly by bad Huſbandry, for it is eaſily pulled up by the Hand, after a great Shower of Rain, having a narrow Bunch of fibrous Roots, that grow near the Surface like a Crow's Foot.

*Wild Teaſels.* Theſe are tall Weeds that exhauſt the Ground much, and grow moſtly in neglected Graſs Grounds: They grow but in few Places; but where they are, theſe, like the large Ant-hills, may ſerve as Beacons to the paſſing Travellers, to let them know there lives a bad Huſbandman in the Neighbourhood.

*Arſmart.* This is a bunchy Root, which, when got old, runs deep into the Earth, and, having many Fibres, cannot then be deſtroyed by the Plough. I lately ſaw a moiſt, loamy, gravelly Field near *Billercay*, quite over-run with it; and though it did not grow very high, yet it cauſed a thin Crop of Grain to be carried into the Barn. Chalking the Ground, and plowing the Land clean, while

it

it is young, deſtroys it; ſo likewiſe do Crops of Turneps and Cale.

*Horſe-Mint.* This alſo annoys Crops of Corn that it grows among, and cannot be weeded, becauſe of its innumerable Stalks, but may be eaſily killed by chalking, clean plowings, and by Crops of Turneps or Cale.

*Wild Sorrel.* This ugly Weed likewiſe very much damages the Grain it grows among, and for the aforeſaid Reaſons cannot be killed by weeding, but by ſowing of Turneps or Cale, chalking the Ground, and plowing it often clean.

*Colt's Foot, or dunny Leaves.* This is a moſt pernicious Weed, and very hard to deſtroy, becauſe its Roots are great Runners, and draw the Goodneſs out of the Ground, to the Damage of the Corn: In *March* it appears by its broad, yellow, round Flowers or Heads, which are ſucceeded by its broad Leaves, that grow near the Ground. Its Cure is to chalk, plow, and hough the Land, but beſt of all by the Break between the Drills of Corn: Carry off its Roots, for its very Pieces will grow; and plow with a Fin on the Share.

*Couch or Twitch Graſs.* This is cauſed by the Sourneſs of the Ground, and therefore moſt ſubject to grow in low, wet, clayey Lands: It cripples the Growth of Corn to a great Degree, and very expeditiouſly increaſes its Roots. Plowings only, in ſuch Soils, will hardly do; and therefore they uſe the great heavy Harrow, which alone is ſometimes full Work enough for ſix or eight Horſes to draw; and then it admirably tears up both Root and Branch of this horrid Graſs-weed, which totally to deſtroy, they lay it in Heaps to burn.

*Wild Thetch, Tyne, or Bind-Weed.* It is an ugly Companion among Corn, eſpecially if the Springtime is attended with Wets and Colds, for then it is natural for this Weed to get the Predominancy, which

which ſufficiently appeared in 1732, in the moiſt Clays and Loams, where it grew up Creeper like from the Bottom to the Top of the Wheat Stalk, hauling and pulling down the ſame, till it ſpoiled the Ear, and thus it extended its Miſchief to almoſt a whole Field of Wheat together. Its Remedy is deep Plowings, due Fallowings, and chalking the Ground; for according to my Obſervation, it comes moſt where theſe three are chiefly wanting.

*Black Bennet.* This is a Sort of Graſs-Weed, that kills vaſt Quantities of Corn, or at leaſt very much leſſens their Crops. About the fourth of *May*, 1730, the black Bennet began to ſhow itſelf a Foot long among Grain that was ſowed in Tilth and Lay-grounds, having before that Time a long wet Seaſon, attended with eaſterly Winds, when the latter ſown Wheat fared beſt, becauſe when the ſevere Weather was over, its Youth cauſed it to run faſter than the forward ſown, and to get the better of the Bennet. This Weed does moſt Damage among Wheat, in Clays, and moiſt Loams, occaſioned chiefly by ſour, rough Tilths, and a wet cold Spring: Its Remedy is a fine Tilth, and a dry Seaſon to ſow the Corn, in a well manured Soil, that has been ſoundly chalked or limed.

*Crow-Needle.* This is a ſpreading Weed, which bears a ſmall white Flower, and grows about half the Height of the Corn: Its Seed lies in the Bottom of Points like Needles, which are about an Inch and a half long, that oftentimes very much foul the Corn, by their being broke to Pieces, when they are thraſhed with the Grain, and are difficult to get clean out: Its Remedy is ſowing clean Seed in a pure Tilth.

*Cliver.* This twiſts about the Wheat like the Tyne-Weed, and does its Damage much like it: Its Seed, is a little round Burr, which requires ſome Labour to clear out of the Grain by the Screen and

the Throw; both this, and the Crow-Needle Seed, will grow again if ſown, though ſome ſay not: This is likewiſe beſt prevented by ſowing clean Seed, and a good Tilth.

*Darnel.* This is a rampant Weed, that moſtly hurts Wheat; becauſe in Barley, its Quality is to add Strength to the Beer, by making it more heady, which cauſes the Malſter not to find much Fault with it, if not in too great a Quantity: But as the Colour of its Flour is brown, feels rough, and has ſome Scent with it; the Mealmen don't like it among Wheat: This is a moſt multiplying Weed, for many of its high Stalks will carry twenty Side-ſhoots, and every one ſix Corns in it, ſo that twenty of its Heads are enough to ſpoil half an Acre of Wheat: It is of ſo hardy a Nature, that it is uſually ſaid, the Dunghill will carry it to the Field. A Farmer that rented ſixty Pound a Year, ſaid, he loſt twenty Pound by it, in one Summer's Crop; and in the Barn, it is almoſt impoſſible to ſeparate it from the Wheat; becauſe, a great Deal of it is near as big as a Wheat-Kernel; nor will it all ſwim on the Top of Brine or Water, as moſt other Seeds of Weeds will, for that the largeſt Seeds of this are as heavy as thoſe of the Wheat: Its Cure, is by throwing it in a Barn, running it through the Wire-flat Screen, or better, in the new invented Round-wired Screen, that the Wheat may be ſent clean to Market: Its Prevention is, by ſowing clear Seed, which ought to be changed every Year, from a different Soil.

*Ches-Seed Weed.* This is a Sort of Darnel, but grows in a different Manner, hanging its ſmall Stalks, which are about an Inch long from the great one, in ſeveral little Bunches.

*Cockle.* Is a little Seed with a black Hull, full of white Flour, for which Reaſon the Mealmen do not much diſpute its being among the Wheat, if not

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in too great a Quantity; but as little Seeds oftentimes do a great Deal of harm, clean Seed changed every Year prevents it.

*May-Weed.*—This is a ſtinking venemous Weed, which bears a white Flower, and is well known to moſt of our *Chilturn* Reapers, who ſometimes have their Hands and Legs ſo bliſtered by it, that they are not capable of working till they get cured by the Application of Houſe-leek Juice, mix'd with Cream, or ſome other Medicine: It very much cripples Grain, and grows chiefly in wet Loams, Clays and Gravels, by Means of ſour Tilths, and ſhowery plowing Times, which make a dry ſowing Seaſon, and a ſweet fine Tilth, its Cure.

*Weeding Potatoes.*—Now weed your Field-Potatoes by the Hand-hough, by this you will make them have large Roots, and keep the Ground in a Tilth for plowing once or twice, and ſowing Wheat on the ſame in *October* following. A Foot Diſtance ſhould be left between each Potatoe, and then they will have Room to encreaſe in Number, if the Ground was well managed, to great Profit. But of this new Improvement more in *February*.

*Weeding Banks.*—Our Banks which are ſet with quick Sets for making new Hedges, generally conſiſt of Virgin Mould; there is a Ditch-Bank, and a Flower-Bank without a Ditch, both which, if neglected, will ſoon be over-run with Weeds, and the Sets become ſtunted; when it ſo happens, the old Way, is to uſe the Kniſe to dig up the many Roots of Graſs and Weeds, which is very tedious and chargeable; and therefore the new Method, that I uſe, is to take a Spade in this or laſt Month, and pare off the upper Cruſt of Graſs, immediately after a Shower of Rain, and as near them between the young Shoots as poſſible, then turn it topſey-turvey, and lay it in the ſame Place, which not only kills the Weeds turn'd up, but alſo ſmoothers

the remaining Roots left behind; and if there were any of the deep rooted Sort got into the Ground, then pulling them firſt up by the Hand when the Land is moiſt and looſe, will deſtroy them: This Method ought annually to be practiſed during the Youth of the quick Sets, as being very ſerviceable to keep of the too powerful Heats of the Sun, and lodging the Rains; but where the Spade cannot, the Knife muſt be uſed. In the Vale of *Aylesbury*, where Wood and Fences are ſcarce, they carefully obſerve this good Management, and ſpare no Pains nor Time in ſuch a beneficial Branch of Farming; for where-ever it is ſlighted, it is becauſe they do not conſider, that a good Hedge will pay its Owner, as much as if Corn grew every Year on the ſame Ground.

*Digging and Weeding by the Mattock.*—This, and the following Month is the beſt Time in the whole Year to employ the Mattock, either after the Plough, in the Furrows in Fallow-Lands, or otherwiſe, for extirpating the Camnock, Honey-ſuckle, Hog-weed, Briars, Coltsfoot, or other Roots, for now they are ſrim and full of Sap, and by Conſequence will bleed and run it out when wounded, which will greatly, if not quite deſtroy the Weeds; but then be ſure to carry off their Strings and Bits, leſt they grow and become a ſecond Increaſe.

*Weeding Standard Trees.*— Now carefully pull, pinch, or cut off the Shoots at the Bottoms or Sides of your Fruit or Timber-Trees, and neglect not doing it in this, or at fartheſt in next Month, for theſe check the Sap's Aſcenſion, and cauſe both Fruit and Tree to pine, and ſometimes kill the Tree out right. This Operation alſo being performed in Summer, very much hinders their ſecond Growth for ſome Years. Moſs alſo, after a Shower of Rain, ſhould be ſcraped, or rubbed off with a Hair-Cloth: Piſmire Banks likewiſe, which ſometimes

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are on the Roots, or at the Bottom of the Body of the Tree, ſhould be carefully dug up; for theſe are often of bad Conſequence, and tend to its Ruin: Their Deſtruction you will have in next Month, with many other curious Matters relating to Vermin and Inſects.

*Weeding-Beans.*— In this Month be ſure to keep your Sheep in Fields of Horſe-beans, to break and keep back the Hell-weed, which ſometimes ſpoils many Hundred Acres of them in a Summer, by faſtening its Thread on the Bean-Pods and Stalks, and keeping them from thriving, and thus will grow and run many Poles together, without any perceptible Root, which has made many ſay, it has none: But this is a Miſtake, as it was proved at *Cheddington* Farm, in *Bucks*, where the Tenant's Son for a Trial, threw its Threads, or Seeds on a little Spot of Graſs-ground, and it preſently came up very thick. The Sheep are certainly the beſt Weeders among this large ſtalked Corn, which is ſown promiſcuouſly, for they will clear it of all Sorts of Weeds, and yet ſeldom hurt the Beans; for which Reaſon, ſome will let them go into them, even in bloſſom Time. In ſome dry hot Seaſons, the Dolphin black Fly proves very deſtructive to both the Field and Garden-Beans, whether drilled or otherwiſe. But to prevent this Miſchief, I ſhall here give you two fine Receipts.

*To ſave Crops of Beans by deſtroying the Dolphin Fly.*— Theſe Inſects always begin to make their Lodgment on the Top of this Vegetable, and increaſe downwards till they kill all or moſt of the growing Beans; therefore, when they have firſt got Poſſeſſion, mow off the Heads of the Beans with a Scythe, and the Fly will never riſe again, for they cannot get upwards. The next Way is to do it by Turkeys: A certain Farmer's Wife uſed to ſcold at her Servants for letting the Turkies go into a Field of

Beans

Beans near her Houſe; but inſtead of Miſchief, they did great Service; for they proved excellent Weeders, by pecking off the Flies for their Food, and cauſed more Beans to grow on four Acres, than was in forty of her Neighbour's that Summer. — Now draw your Prong or Plate-break, by one or two Horſes, between the Rows of drilled Beans; the firſt is too looſen the Ground, and kill the Weeds, the other to caſt the Mould up to their Sides: This moſt ſerviceable Way cauſed ſuch vaſt Crops both of the Horſe and broad Beans in the Fields this wet Summer, 1738, as made them grow to ſix or ſeven Feet high. As ſoon as ever the Bloſſom falls off from the Bottom of the broad Bean Stalk; that is, as ſoon as the lowermoſt Kid appears, then cut or pinch off juſt the Head of the Stalk, for then as the Stalk kids upwards, this Method will ſtop its ſhooting in Length, make it corn better, and leſs liable to the Dolphin Fly; but this Work is rather too tedious to be done among Horſe-beans.

*Weeding Peaſe.*—Early in this Month, or as ſoon as the Weeds are long enough, with the Hand-hook of five Feet long, weed out the Thiſtle and others from among your Peaſe, before you begin upon any other Corn; becauſe otherwiſe they will draw and cover the Ground ſo as to cramp the Growth of the Peaſe; for theſe are more tender and precarious in their thriving, than many other Sorts of Corn. If your Peaſe are drilled, draw your Horſe-break between the Rows; and if occaſion be, uſe the common Hand-hough afterwards, to lay the Mould cloſer to the Stalks. The very Beginning of this Month, you may ſow Hotſpur, or *Eſſex* Roading Peaſe in Drills, in warm Soils, to come in *September*, or *October*.

*The cheapeſt Way of weeding Hops, and their other Management in* May. — In this Month thoſe Vines which

which are grown two or three Feet long, and have not taken to the Poles of themſelves, muſt be guided by the Hand to the neareſt Pole, that has the feweſt Vines, obſerving to couple the ſtrongeſt Vine to the talleſt Pole; the Number is three weak, or two ſtrong ones to each Pole, that are to be twiſted at an equal Diſtance, and according to the Courſe of the Sun, when they are to be bound with Broom-ſhoots, wither'd Ruſhes, or woollen Yarn, but not cloſe, leaſt the Preſſure ſhould Damage them; two or three Strings at proper Heights will do for one Pole, and ſo proceed on till the Plantation is finiſhed; when they have cloſely taken to the Pole, cut off all the other weak Vine Shoots cloſe to the Ground: The next tying muſt be about four Feet and a Half high, and if the Vines do not keep cloſe to the Pole, the ſtanding Ladder muſt be imployed to tie them higher up once more; and though in wet Summers, the Vines ſometimes out-run their Poles, yet they muſt be ſuffered, unleſs they hang down very much, and overload them, and then with a long Switch, you may ſtrike off their Heads, which if done in Time, will encreaſe their Branching: What I here call tying, is done by twiſting the Yarn, that it may give way as the Vine enlarges itſelf. Now carefully keep all Weeds, and the Seeds of Weeds from annoying your Hop-Ground: At a certain Place, they chiefly do it by the Back-hand-hough; and at another, they uſe the Prong-hand-hough, with which one Man will clean Half an Acre of Ground in a Day, which before has been looſened. But there are two other late invented Machines that excellently clean the Ground of Weeds: One is called the Niget, or the one Wheel-hough-plough, which by the Help of two able Horſes in Length, and two Men, one to hold, and the other to drive it, will greatly looſen the Earth, kill the Weeds, and

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let in the Air and Rain; but its nine little Houghs or Feet cauſe ſo hard a Draught for two Horſes, that they are obliged to ſtop at every fifteen or twenty Feet for the Ploughman to draw it a little back, and raiſe it out of the Ground to begin again, and then it leaves a high Parcel of Earth in the Place, that muſt afterwards be ſpread by a Forkman: The other is the Sheim or Prong-Plough, drawn in a high two Wheel Carriage, guided by its two Handles, and held by a Ploughman; who, with it and two ſtout Horſes, can plough nine Acres in four Days (if the Earth was looſened before) for this is not to be lifted as the former is, out of the Ground, unleſs it be at Turnings, and yet will plow well, if the Land is a little ſtony, which the other will not. Others will dig the Ground to clear it of Weeds with the Prong-Spade, which alſo, in ſtiff or gravelly Earths, performs well; and in a loamy, ſandy Earth, one Man with it will looſen Half an Acre a Day, and deſtroy all Weeds that were growing in the ſame. Take Care you do not touch the Hills with the Ploughs, leaſt they tear the Roots of the Vines, for theſe are only to be managed by the Spade and the Hand-hough; the latter to looſen the Ground, and kill the Weeds, and the former to ſupply the Hills with Parings of Mould, which are to be laid on at each weeding Time, after ſome Rain, to keep the Hills in a continual Moiſture, and better nouriſh their Roots: Yet is this general Rule not without an Exception, for when the Vines appear vigorous, and full of Sap, give them no more of this Aſſiſtance, leaſt it make them run too much into Stalk, and hinder their bearing Hops; for as it is ſaid, you may enrich the Roots, when you cannot check them. Mr. *Godfrey*, of *Town Malding*, told me, he made his Ground ſo rich, that for ſeveral Years he could not ſtop the Roots from cauſing too rank

a Vine

a Vine, and thereby loſt great Quantities of Hops, which his Neighbours enjoyed; his Soil is a ſandy Loam. The Hop-Hills are to be a little more than two Feet broad, and one and a half high from the common Surface: In low, moiſt, rich Ground, the Hills ſhould be higher and larger than thoſe in dry, ſhallow, high Lands; for, the higher the Hill, the larger the Roots, Binds, and Sets. If there be only ſmall Weeds on the Hills, and thoſe not in Flower or Seed, then it is not worth while to weed them by the Hand; the Cover of the Parings will kill them; but if the Weeds are larger, or the Hills want looſening, then they uſe an Inſtrument called a *Pick*.

About *Canterbury* they give eighteen Shillings an Acre a little before *Chriſtmas*, for digging the Hop-Alleys with the common flat Spade; in the Spring they give five Shillings an Acre for cutting and pruning the Roots of the Hops, which they trim very nicely; ſix Shillings an Acre for digging with the Hand-Prong-Hough, and four Shillings an Acre for weeding or ploughing all the Interſpaces with the Sheim. I ſhould have given the ſeveral Cuts of theſe Inſtruments, but the Price of my Book won't defray it. In this Month, or in the two following, ſome ſow their Hop-Grounds with Turneps, to keep the Ground clear of Weeds, by houghing theſe Plants, and enjoying an early Crop of them; but this Way has its Diſadvantages, for, as they commonly draw them, it impoveriſhes the Ground, and robs the Hop-Plant, unleſs there be a ſufficient Quantity of Manure allowed afterwards: Yet is this to be done according to the Nature of the Soil, for, if theſe are ſown upon a ſandy Loam, and eaten off by Sheep in Winter, their Dung and Stale will parch and damage the Hop-Roots, that the Hops commonly ſuffer the next Summer, and Pigeons Dung will intirely kill them; beſides

which, both in this Earth, and in ſtiff Grounds more, the Sheep, by their Weight and cloven Feet, tread down the Ground into a cloſe Texture of Parts, and thereby make it more chargeable to get looſe and light again, therefore they account it beſt to draw them; however, for theſe Reaſons, moſt Owners of Hop Grounds refuſe to ſow any Vegetable between the Rows, yet I muſt commend a great Improvement of this Nature, which I ſaw in a By-part about thirty Miles from *London*, in 1738, where the Owner had planted a Number of uncommon Roots, which every Year return'd a conſiderable Profit, and did little or no Damage to the Hops; this I intend to write of next Month.

*Weeding Dwarf Roſes.*—This belongs chiefly to the Hop Farmer or Planter, becauſe it is a moſt profitable Vegetable when it grows in Hop-Alleys, which, in a certain Country, was expoſed to my View; I mean the red Roſe uſed by the Apothecaries. Theſe muſt have a proper Soil to grow in, and to be well weeded in this Month in particular, by the Knife and Hand-hough, after the Hough-Plough or Break has been as near as it could go. Theſe Sort of Roſes grow about two or three Feet high, and two or three Feet broad like a low Hedge. Their Manner of Planting, in the Middle of Hop-Alleys, I intend to ſhew in a proper Month, and their Gathering I ſhall take Notice of in *June*.

*Weeding the large black and white Poppey.*— Now weed your Poppies by the Hand-hough, whoſe Seed was ſown promiſcuouſly, that they may grow the larger, and be the ſooner ripe for gathering about the Beginning of *Auguſt*. In *Surrey* a Man told me he made three Pounds of as many as grew on five or ſix Poles of Ground, and I lately ſaw them flouriſh in an Orchard to near five or ſix Feet in Heighth; they are commonly ſold to the Apothecaries, and are a great Improvement, and I am of

Opinion

Opinion that they may be ſown in Drills to a better Purpoſe. Their Culture I intend to publiſh in a proper Month.

*Weeding Lucern.*— In this Month weed that Lucerne, whoſe Seeds were drilled in, in ſandy or low marſhy Grounds in *February* or *March*. I will ſuppoſe the Drills to be about twenty-four Inches aſunder, and then the Horſe-Break may in this Month be drawn through the Intervals, and after that the Hand-hough may be uſed: Or, if Lucern was ſowed with an Intent to hough the Ground between the Maſter-Stalks, as Turneps are houghed, the common Hand-hough muſt be uſed; but then there muſt be two Houghings at leaſt employed to do the Work clean. The common Way is to ſow this Seed promiſcuouſly as we do Clover.

*Weeding ſeveral Vegetables.*— In this Month weed Saffron, Woad, Liquorice, Coriander-plants, Carraways, Teaſels, Madder, Hemp, Flax, Weld, Gooſeberry, and Currant Buſhes, deſtroy Fern and Ruſhes, and weed Potatoe Grounds: Several of theſe may be made to grow better in Drills than in Broad-lands; but, as to Potatoes, there is a new Way of planting them to a very great Advantage, which I intend to publiſh in *February*.

## CHAP. IV.

### *Of* Manures *and* Dreſſings *proper for this Month.*

DUNG *or Muck.*— In this Month employ what Dung you have left in your Yard, by carrying it on your Fallow-Ground, which has been once plowed in *April*; ſpread it well, and plow it in, the latter End of this Month in all ſtiff Soils: It is much better ſo, than to let it remain in a Clamp 'till Turnep, or Wheat Seed Time, becauſe by then it wou'd be much waſted by the Air, Rain, and Sun; but, if in ſuch Earths it is mixed in due Time, it will ferment it, and make it ſhort, ſweet, and rich, for the Reception of Turnep, Cole, or Wheat Seed, and thereby be better prepared to admit their thready Roots into its innumerable Pores, and adminiſter its fertilizing Salts, to the forwarding the vigorous Growth of the Vegetable; and thus the Turnep, in particular, is puſhed on ſo quick, as to make them out-run the Damage of the Fly, Slug, and Worm, as well as the Prejudice of hot and dry Weather, by which an early Crop will be brought on, and their Bulk greatly increaſed; when, at the ſame Time, your Neighbour, who has not made Uſe of this Improvement, may loſe his Crop by ſeveral impending Accidents, or at beſt get only a Parcel of poor ſtunted Turneps.

But, in this Field Oeconomy, particular Regard ought to be had to the Nature of the Soil: For, if it is a raſhy Gravel, or a dry, hungry, hurlucky Ground, that you are to ſow Wheat in at *Michaelmas*, or later, then you ought to forbear laying on your Dung till you are juſt going to plow and ſow it; in this Caſe the Dung muſt be fully rotted,

rotted, elſe the Harrows will tear it out again; if the Seed is ſown in Broad-lands, and if your Ground is ſown in Stitches, and the Dung be long, it will be apt to bury ſome of the Seed, make it lie in unequal Parts, and breed a Mould which will prove deſtructive to the Grain: Thus the two common Miſtake, and fatal Conſequence of dunging ſuch Land, is avoided, which, by too early dreſſing it, would give ſuch a hawky Soil an Opportunity of devouring the Dung, before the Growth of the Wheat is half over, and then you may expect a poor, ſtarv'd Crop.

*Mould and Lime.*— This Month being a leiſure Time with ſome Farmers, get what Mould you can, and mix it with Dung and Lime; the latter will make the grazy or rooty Mould run into ſmall Parts, and ſo ferment them all, as to make them incorporate in a fine Manner, and become fit to be laid on Land, and plowed in, in the Month of *July*, for Turneps or Rye, or for Wheat afterwards. Or if Mud is ſo ſerved, inſtead of Mould, it will anſwer to a good Purpoſe, and their Proportion ſhou'd be three Parts Mould or Mud, and one Part Lime, or about ten Loads of Mould or Mud, to two Loads or ninety-ſix Buſhels of Lime, to be laid length-ways, in a long, narrow Heap, broad at Bottom, and narrow at Top, ſomewhat like a Hog's Body, for the Rain to waſh the better off it. This Compoſition makes a moſt excellent Manure for nouriſhing both Corn and Graſſes; and therefore is very proper to be uſed on both Plowed and Meadow-Lands; and this advantageous Practice is now become ſo much in Eſteem by the beſt of Farmers, that, in order to come by this delicate Dreſſing, they often dig up their Mould, and carry it away for this Purpoſe, from the very Roots of their Hedge-Plants; and, to do this to the beſt Advantage,

ſome

will firſt lay a Quantity of Mould or Mud all along the Bottom, then a Layer of Lime and Dung, and Mould at Top; others will lay ſome Mould firſt at Bottom, and then a long Row of Stone-Lime, and on both Sides of it, Mould and Dung mixed, which is all, ſome Time after, to be mixed with a Spade or Shovel, till it is incorporated into one fine Body, and then it will fertiliſe almoſt all Sorts of Land, as being an agreeable Manure, which will rather deſtroy than breed Weeds: But of Lime and theſe, more hereafter.

*Vale-Men diſcommended in dunging their Land.*— As I have now writ on the Dunging, or Dreſſing *Chilturn* Lands, I ſhall here touch on that of Vale Grounds; in which reſpect I cannot help diſpraiſing thoſe, who after their Dung is once thrown up in their Yards, in a Clamp in the Spring Time, do no more to it than lay and ſpread it on their ridge Lands, the latter End of this, or in the Month of *June*, againſt the Wheat Seaſon, as I have often known them do, where they let it lie thus on the Surface of the Ground, expoſed to the Sun, Air, and Rain for a Month or two together, before they plow it in, till moſt of its Quinteſſence is exhauſted: But, in Defence of this Practice, they alledge that, in this Time, the Rains waſh its Goodneſs into the Earth, and they enjoy it this Way; which I think a poor Excuſe, for many Times no Rain falls in that Space of Time, and then their Plea is groundleſs: But allowing that there ſhould ſome wet Seaſons happen, yet the Interims of dry Weather muſt conſequently rob the Dung of Part of its Vertue, while it thus lies above Ground: But of late they are become a little better Husbands, by rotting their Dung againſt *Michaelmas*.

*Dunging Meadow Ground.*— Now be increaſing your Dunghils, in order to get them rotted and fine,

fine againſt the Time you get your Field clear'd of the firſt and ſecond Crops of Graſs: Some lay it on after the firſt, to increaſe the ſecond; others not till *October*, when it is fed bare. This Sort of Dunghil requires to be turned often, mixed well, and rotted to the higheſt Perfection of Fineneſs; for, the ſmaller its Parts are, the better and ſooner it mixes with the ſmall Roots of the Graſs, and thereby brings on an early Cover, and that an early Mowing, once if not twice in a Summer, and then great Burthens; as is annually proved by the *Edgware* and *Hendon* Men in particular, who certainly are the moſt curious Managers of a Dunghil in this Nation, and yet are at a conſiderable Charge all the Summer, to bring their *London* Lay-ſtall, Muck and Dung, and Coal-Aſhes, three, ſeven, and ten Miles on the Wheels, which they moſt careſully mix with Highway Dirt, Mould, and ſometimes Chalk, and incorporate them ſo, often, till they attain a moſt exquiſite Fineneſs, againſt their ſpreading Seaſons.

*To alter red or other Clays, and reduce them to a Loam.*— On the Clay-Land, that was laſt Month fallowed in Broad-Lands, lay in Heaps, on one Acre, the Quantity of ſixty or a Hundred Buſhels of Coal-Aſhes; the more the better, and ſpread them with a Shovel or Spade in a dewy Morning, to prevent their flying too far; then plow them in as ſhallow as poſſible into Broad-Lands again a-croſs the laſt Way, or into four thoroughed Stitches, or by hacking the Ground. If the Aſhes are plowed into Broad-Lands ſhallow the firſt Time, you muſt go deeper with the Plough the ſecond Time; and thus you will be in leſs Danger of burying them, by which the Clay and Aſhes will the better mix, and be expoſed to the Sun, Air, and Rain, for its Melioration; at *Michaelmas*, the ſame may be ſown with Wheat in Stitches, as the

beſt

beſt Way to cauſe a further Incorporation of theſe two contrary Bodies, and bring them into one: And, to add to this great Improvement, in *January* following, ſow forty Buſhels of ſlaked Lime over the ſame Acre, or twenty-five Buſhels of *London* Soot; either of which will ſtill forward the Reduction of the Clay's Body, ſhorten and overcome it better than Sand, which is of ſharp Parts, and therefore the eaſier devoured by ſuch a tough, tenacious Earth: And though Coal-Aſhes are likewiſe endowed with ſharp Particles, which are binding and drying, they are yet of a very ſhortening Nature, inſomuch that, after they have been mix'd by repeated Turnings of the Plough, and two or three Crops have been obtained, they will ſo divide and adhere to the moiſt, viſcous Body of the Clay, as to reduce it to an intire loamy Earth; and the more ſo, if ſuch dry Manures of ſhort, rotten Horſe Dung, Wood, or Coal Aſhes, Lime and Lime-Aſhes, Malt-Duſt, Oil-Cake Powder, and the like, be often uſed in this Work. Theſe, as well as the Scratchings of the Harrow-Tines, the Movements of the Plough, and the Intanglements of the fibrous Roots of the Corn, do all contribute to cement the Clay and Aſhes together, ſo that, by theſe Revolutions, a barren Clay may be made a fruitful Loam, at a ſmall Charge, and in a little Time. The Proof of this is obvious, from the great Quantities of Clay and Aſhes that are mixed together in the adjacent Parts of *London*, which, after ſome Time lying, becomes a loamy Body, and of a Hazel Colour, for making Bricks and Tiles.

*Alterations of Manures and Dreſſings.*— This is abſolutely neceſſary in both Meadow and Arable Grounds; for in the firſt it has been proved, that, by ſowing Aſhes ſome Years together, they have lain at the Roots, violently drawed the Goodneſs out

out of the Ground, and in Time ſo choaked the Plants, that they produced but very thin Crops of Hay. So Horſe-dung, for the ſame Reaſon, may be annually applied, till the Ground will bear no Graſs. Arable Land will alſo complain, if too frequently dreſſed with one Sort of Manure: As for Example, if Soot, or Lime, is uſed each on two or three Crops together, the Conſequence will be thin Returns of Grain; a judicious Farmer therefore always takes Care to change his Dreſſings as often as he can; hence it is, that many are ſo curious to mix Earth, Lime, and Dung together, as beſt agreeing in the Dunghill, and on the Ground afterwards. Again, the Nature of Manures is to be conſidered for their alternate Application: Soot, Lime and Aſhes generally produce a ſhort, thick Graſs; Dung, or Fold, long Graſs; for which Reaſons, Dung, or Fold ſhould follow Soot, Aſhes, or Lime, and ſo on; likewiſe where Graſs, on Downs, or other dry Bottoms, is naturally ſhort, Cart-dung or the Fold ſhould be made uſe of, before the burning Sort. A Gentleman that keeps twelve hundred Sheep lays ſo great a Streſs on this Piece of Huſbandry, that he hopes by this Means to have Sheep worth ſixteen or eighteen Shilling a Head, inſtead of a ſmaller Sort of eight or ten Shillings Value, which he uſed to have; and that by employing his Fold on ſuch ſhort Graſs, and feeding his Sheep in the Winter with Pea or other Straw out of Racks; for either Hay or Straw, conſumed in this Manner, warms the Roots of the Graſs, keeps off Chills, prevents the Growth of Moſs, and, by the Worms drawing it into the Ground, becomes a Sort of under Dreſſing, beſides the Improvement of the Dung, Stale, and Heat of the Sheep's woolly Bodies.

*Marles.* I am informed that in *Cheſhire*, in this Month, or in *June* or *July*, they dig Marle to dreſs

their Ground withal, which, being open Field-Land, lies in *Buts* of Graſs (according to their Term) which perhaps has continued ſo, ten, twenty, or thirty Years: Theſe they plow up for Corn, and dreſs with Marle; of which there are four ſeveral Sorts, *viz.* The Fuſtian, the Cowſhit, the Black-ſteel, and the Shale: The Fuſtian Sort is an Earth compoſed of a fat Loam and Sand, of a reddiſh Colour, ſo ſoft and looſe, that they ſpit it with a Spade, and laſts but four or five Years, though relieved with other Dreſſings in that Time: The Cowſhit, which is the richeſt Sort, looks to be an Earth mingled with Lime, having many little white Specks in it, and will laſt ſeven Years with Aſſiſtance; this is all ſpitted or thrown out with the Spade: The Black-ſteel Marle is of ſo hard a Nature, that they dig it with Mattock and Spade, and will not all diſſolve in ſeven Years, nor will all its Goodneſs be ſpent in twelve: The Shale-Marle is of all Colours, and of a ſtony Nature, which obliges them to peck and hew it, and then it comes like Bits of Stone; yet this will laſt but four or five Years, though helped with other Dreſſings: Of theſe they ſometimes lay above five hundred Heaps on one Acre; and, after it is ſpread, they let it lie diſſolving the remaining Part of the Summer, and the whole Winter, till they give it one Plowing, between *Chriſtmas* and *Candlemas*, and afterwards harrow in Oats; the next Time they muck well, plow, and ſow Barley; then for the next Crop they give the ſame Ground a Fallow, and dreſs with Lime and Dung, and ſow Wheat, and Beans after that: Thus, when they have got about ſeven Crops, they lay it down for natural Graſs, which of itſelf will be a Crop the very next Year; though ſome more prudently, of late, lay it down with artificial Graſſes. In their incloſed Meadows, they

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do not uſe any Marle, becauſe they find it to have ſuch a binding Nature, as to hinder the Growth of Graſs; for which Reaſon they dreſs with Dung only; nor will ſome Marles anſwer in arable Land, where the Soil is not agreeable. I heard of a certain Farmer, who was ruined by dreſſing a clayey Ground with a ſtiff reddiſh Marle, which, in a dry hot Summer, burnt and dried up his Grain, and, in a cold, wet one, chilled and crippled his Crops; and this he ſuffered the more, becauſe he was poor and could not purchaſe alternate Dreſſings. In *Hampſhire*, *Surrey*, *Kent*, *Eſſex*, *Suffolk*, and *Norfolk*, Marle is their chiefeſt Manure, and does a great deal of Service, eſpecially in their Gravels and Sands. About *Woodbridge* they make uſe of a ſhelly Marle, which they there call *Cragg*, which about thirty Years ago was found out by mending a Cart-way with it, where, afterwards happening to ſow Grain in the ſame Place, it proved a better Crop than ordinary, and ever ſince they dig it for a Manure: It is a reddiſh, ſhelly Earth, which, being laid on to the Quantity of twenty-five Cart-Loads on one Acre, dreſſes it for ſeven or twelve Years; ſo that, at this Time, they have dug Pits of it in many Places, and carry it to great Diſtances, where it returns them prodigious Burthens of Grain in their hungry, ſandy Grounds. In this Earth, Cockle and other Shells are commonly found mixed, which has cauſed ſome to imagine, that this Ground was formerly gained from the Sea; and the rather, becauſe the Salt-water is at this Time not far from it; as it is ſaid of the moſt fertile *Romney-Marſh*, whoſe Bottom ſeemed to me to be of a ſhelly Earth, which has been gained from the Sea not many Years ſince, and produces ſuch Graſs, which exceeds all others in *Kent*, for fattening Cattle in a little Time without rotting them.

*Soot.* In the Year 1735, the Weather was dry almoſt throughout *May*, and part of *April*, which ſet the Barley which was ſown late in Gravels, Chalks, and Sands, to that Degree, that ſeveral Fields looked bald the latter End of this Month, eſpecially where they dreſſed the Corn that grew on ſuch Soils with Soot, which helped the more to dry away their Grain; whereas had they ſoaked their Barley-Seed, according to my Receipt, and then footed it betimes, this fatal Misfortune had been prevented; however, one of my Neighbours was ſo wiſe as to foot his Wheat in *January*, and tho' it was in a chalky Land, yet by the Help of the early Rains it was a moſt flouriſhing Crop. But neither Barley nor Wheat ſhould be footed after the twenty-fifth Day of *April*, unleſs the Barley was very latter ſown indeed; becauſe the Wheat, and commonly the Barley, have then done gathering and branching, and got upon the Spindle. As ſoon as *French* Wheat or Weld is ſown in this Month, Soot may be either ſown over the ſame Ground, or better harrowed in with the Grain. It is likewiſe proper to be ſown over young Turneps that have all juſt appeared. Or, in caſe you have been neceſſitated to ſow Barley the Beginning of this Month, Soot may be uſed to its Improvement, in the Manner it is done with the *French* Wheat or Weld.

*Aſhes.* If Barley is ſown ſo late as the Beginning of *May*, lean Peat-Aſhes in particular may be applied over it, or harrowed in with the Grain; but Aſhes burnt from fat black Peat, ſuch as they dig by *Newbury*, are of ſuch a ſulphureous Nature, that they are afraid to lay them on their Barley; and they do not dreſs their Wheat with them till the Spring is advanced, and then they are ſowed over it. The Account of this rich Manure take as follows, *viz.* The Earth is taken out of a black mooriſh

mooriſh Ground, by a wooden, narrow Scoop, which brings it out like a long narrow Brick; this they lay on the Ground to dry in the Summer Time, and then ſell it for eight Shillings a Waggon Load as proviſional Fuel for Families: But when it is to be uſed for a Manure, after it is dried, they burn it in Heaps of ten, twenty or thirty Loads, laying on more Peat on the Outſides, as the Fire increaſes within, to keep it from having too much Vent; however, in Time there will appear a conſiderable Smoke; and it was on the twenty-third of this Month, 1737, that I ſaw about ten great Heaps, burning for this Purpoſe, near where it was dug. The great Uſe of theſe Aſhes was found out about thirty Years ago; but in a little Time after were brought into Diſreputation, by their imprudently laying on too many at a Time, which burnt up the Corn. Afterwards they found that ſix or ten Buſhels were ſufficient to be ſown over an Acre of Wheat, Peaſe, Turneps, Clover, Rape-Seed, or St. *Foyne*, as early as they conveniently could. But, as I ſaid before, they are afraid to ſow it over Barley, leſt a dry Time ſhould enſue and burn it up; for theſe Aſhes are reckoned to contain three Times as much Sulphur in them as in the Coal-Aſhes; and this they reaſonably imagine from their great brimſtony Smell, ſparkling and jumping, when they are ſtirred as they are burning, and drying up the Corn by their too great Heat. Theſe Peat-Aſhes, and likewiſe thoſe from Wood or Coal, will help to keep off the Slug from Peaſe and other Grains, by the Salt and Sulphur contained in them, and very much conduce to their Preſervation in cold wet Seaſons. But there is no ſuch Danger to be feared from the Aſhes of that Peat, which grows as a Turf over ſandy Bottoms, as great Quantities do on *Leigh-*

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*ton-Heath* in *Bedfordſhire*, for theſe are as much too lean, as the other are too rank.

*Penning Sheep, or dreſſing by the Fold.* Now Folding is in Perfection, by Reaſon of the Commons and Fields being frim of Graſs, and which is apt to cauſe Diſtempers in Sheep, by being too full of Blood, occaſioned by their greedy feeding after a long penurious Winter; and this has made me often wonder at the ill Management of moſt Farmers, who ſeldom ever uſe any Medicine to prevent ſuch Plethory or Overfulneſs of Blood, and the red Water, which Sheep are very ſubject to at this Time; though both may be eaſily prevented, if now and then, at Spring and Fall, they give them a few Doſes of my Barrel Liquor, which I have preſcribed in laſt Month; and is a Thing perfectly neceſſary for the Relief of this moſt uſeful Creature, who in Courſe is amaſſing foul Humours, by the Dirt, Wet, and Cold of the ſevere Seaſon, which impregnates the Graſs with flaſhy, raw, earthy Qualities: Therefore alſo be ſure to fold them late at Night, and unfold them late in the Morning, firſt ſtirring and driving them about the Pen briſkly; for, by this, the Sun will have Time to exhale the deſtructive Vapours of the Earth, which in this Month, as they are plentifully converted into Dews, are apt to breed Cobwebs and Inſects of a poiſonous Nature, which often prove the Bane of Sheep: For which Reaſon carefully drive them firſt over the Place they are that Morning to feed on, in order to trample on and deſtroy thoſe Cobwebs and Inſects, and likewiſe to breathe the Sheep, and thus cauſe them to evacuate their ill Humours through the Pores of their ſpungy Skins, which will be a great Means to prevent the red Water. This Dreſſing by the Fold is, undoubtedly, the beſt and moſt univerſal of all others; becauſe it agrees both with Vale and *Chilturn* Lands, and may

may be had when others can't; but it is to be obſerved that it does more good on ſome Sort of Ground, than on others: Loams, Gravels, Chalks, Sands, and other light, dry Earths, receive the greateſt Benefit from their unctuous Dung, Urine, warm Bodies and Treads; but, on flat, wet Loams, and cold Clays, it does not anſwer quite ſo well. Folding is excellent on Ground preparatory for Sowing Wheat, Barley, Turneps, *&c.* and alſo after Sowing, not only by their treading in the Seed for its better Nouriſhment, and keeping the Stalks afterwards from falling down, but likewiſe to preſerve it from the devouring Birds, Slugs, and Worms. But, in this Management, due Care ought to be taken to keep the Sheep off that which has been folded on, leſt the new ſprouting Blade be bitten off: This is ſo material a Point, that ſome object againſt this beneficial Proceeding, on this very Account; but, where a good Shepherd and a well broke Dog have the Superintendency of this Affair, there is the leſs Danger of ſuch Damage. The Fold has been found to be ſo profitable as to tempt ſome to fold their Hogs, whoſe Dung, Urine, and Feet are very agreeable both to fallow Ground, and on new-ſown Corn, if done in dry Times, and the Beaſts are well ringed at their Noſe: For this Purpoſe their Hurdles muſt be all cloſe and ſtrong made, that they may confine this ſtrong, roving Creature, which has been found ſo difficult a Matter to do, as to diſcourage ſome from carrying on this ſerviceable Way; however, in Gravels and ſuch hard Grounds where they cannot much ſtolch, it may very well be worth while to be at the Charge of Iron Socket-Stakes, which may be drove ſo deep into the Earth, as to defy their Strength and Cuning to get out.

*The Manure of natural Earth.* This certainly is the moſt genial Dreſſing of all others, to all Sorts of Roots whatever: It not only procures the largeſt and ſweeteſt Kitchen Plants, but alſo brings forward very ſafely the greateſt Crops of Corn, and artificial Graſſes, as well as the moſt healthy and expeditious Growth of Trees. Nothing fertiliſes any Plant better than Virgin Mould, of whoſe Nature all Earths have their Share, that have had the Benefits of due Fallowings, by the Plough, or were made fine by the Hough and Break; and then it moſt effectually ſupplies Dung, as appears partly in the old, but more eſpecially and fully in the new Huſbandry; and to enjoy it in this Condition, as ſoon as poſſible, it has racked the Wits of many, to find out the cheapeſt Methods: In the old Huſbandry, the quickeſt Way in the Fallowing Seaſons, in *Chilturn*, loamy Soils, is to plow the laſt Stubble into Broad-lands, in *April* or *May* at furtheſt; the next Time, to bout acroſs; the third Time to bout off the laſt Bouts, and then thorough down, harrow plain, and plow and ſow Wheat; this Operation ſo pulveriſes the Ground, as to create in it an infinite Number of new Pores, at each ſucceſſive Plowing, that are by this Means made ſmaller and ſmaller; and the leſſer theſe imperceptible Holes are, the more ſoft and ſpungy is the Earth's Body, and, by this, the better fitted for the larger Reception of the nutritious Dews; therefore, the oftener, deeper, and longer, ſuch loamy and clayey Soils are plowed, the greater Quantity of nitrous Dew it receives and lodges: Hence it is, that I know a certain Farmer, who rents about a hundred Acres of good incloſed Land in *Hertfordſhire*, and dungs but once in ſix Years, yet has commonly the beſt Crops of Wheat in the Pariſh; by Reaſon he every Summer takes this Method to get his Land into an expeditious

ditious, exquiſite fine Tilth, which, indeed, is much better Husbandry than to dung a coarſe Land oftener, which at Sowing-time lies in a rough Tilth. But, as I have before obſerved, there is an Exception belongs to this Management: For tho' hurlucky Chalks, hungry Sands, raſhy Gravels, and lean light Loams are, by frequent Toſſings and Tumblings about by the Plough, brought into a cloſer Body, as Clays and ſtiff Lands are brought into a lighter, and thereby both the better fitted for receiving and lodging the ſilky, capillary Roots of Seeds; yet ſuch light Soils will not bear ſo many repeated Plowings as the ſtiffer Sorts; becauſe the better Part of theſe generally conſiſts in a fine thin Surface, whoſe mouldy Particles may be too much waſted downwards by long and frequent Rains into their hollow, hungry Bottoms, to the great Impoveriſhment of ſuch Lands: It is on this Account, therefore, that we endeavour to plow theſe as little as we can, ſo we do but get them into a fine Tilth; and, for a further Advantage, we take Care to ſow the Chalks and Sands in moiſt Seaſons, for their cloſer inveloping the Seed, which thus very much ſecures theſe looſe Earths from the Power of Froſts, Winds, and the Waſh of Rains, and alſo for more effectually preventing the eaſy Growth of Poppy, and other Weeds, and to ſave the Wheat, Oats, or Barley from falling down. Of this ſome Farmers are ſo careful, that, as ſoon as Wheat is ſown in Chalks in four-thoroughed Ridges, they draw a Roll once length-ways over their Tops, to faſten the Ground. However, both light and ſtiff Soils muſt be made fine, elſe the Roots will have the greater Difficulty to penetrate, and be obliged to draw their Nouriſhment at the further Diſtance, to their conſiderable Damage.

But by houghing Plants, Corn, Graſſes, young Hedges, or young Trees, with the Three-wheel or Pulley-Ploughs, or with Breaks or Houghs, their Roots are kept moiſt in a conſtant, fine, looſe Mould; for, by this Sort of Management, Roots require leſs Water than thoſe that grow from Seed ſown broad-caſt, becauſe ſuch Houghings capacitate the hollow Earth to receive the Dews *in a* plentiful Manner, and moſtly ſo in the hotteſt, drieſt Seaſons, whereby the ſulphureous and *ſaline* Qualities contained in Dews, nouriſh the finer Roots to a great Degree: Hence it is, that, *the* harder the Ground, the leſs it receives of this noble Suſtenance; which is ſo rich, that no *Dung* can equaliſe it, when due Quantities are obtained and rightly applied to Roots of Plants by the Horſe-Inſtruments; which are far more ſerviceable in theſe Reſpects than any of the Hand-Tools, becauſe thoſe can never go ſo deep, nor turn up the Mould in ſuch a profitable Manner, as the others: Nevertheleſs, the Hand-hough muſt not be excluded its Service in theſe Works; for when the Plough or Break cannot come near enough to the Corn, Graſs, young Hedges, and Trees, or when that Part of the Mould is clotty next to them, then the Hand-hough is to be uſed, to lay the Earth fine and cloſe, and in a right Poſition, for the due Nouriſhment of their Stalks and Roots.

*Lime.* You that have not been ſo good Huſbands as to mix your Dung, Mould, and Lime together before now, do it the Beginning of this Month againſt Wheat-Seaſon (for at this Time it is rather too late to do it for Turneps) by this you will bring all the Compoſt into a Fermentation, which, by the Help of the Dung and Lime, will burn up all the Seeds of Weeds, and the ſmall Roots that may be contained in the Mould; all twitch or couch Graſs and all ſour Juices are by this deſtroyed,

deſtroyed, and the Whole made to run into a fine Body. If you are to mix Lime with only Pond, River, or Ditch Mud, then put one Load, or five or ſix Quarters of Lime, to ten large Loads of Mud; obſerve alſo, that this muſt be once turned at leaſt before you lay it on for Wheat, that all may be duly incorporated and made fine. There are ſome Farmers who uſe Lime in a Dunghil, thus: Firſt they lay a Bottom of Horſe, Cow, Aſs, or Hog Dung, of two Feet thick, upon which they ſpread a Covering of Earth two Feet thick likewiſe; on this they lay what Lime they think fit, then dung their Earth, and then Lime as before, and ſo on, till they have their Quantity, and at laſt cover with Turf or Mould, to keep the Sun from drying it too much, letting ſuch a Heap lie rather broad than high, that they may the better ferment together; and this they never fail to turn once at leaſt. Lime is ſo great a Shortener of Mould, that, if it is thrown but thinly on plowed Land, in Ridges eſpecially, in *September*, *October*, or other Winter Months, it will waſh into, and fine it, with the Help of Froſts. Lime alone is uſed for *French* Wheat, as well as common Wheat, and is alſo excellent for Meadow-Ground, Turneps, Peaſe, *&c.* as being a cool, ſweet, rich Dreſſing, and helps the Corn to kern, hollows the Ground, ſweetens the Bite of Graſs, and in many Places is made to ſupply Dungs and other Dreſſings; but more of this in proper Months.

*Chalking Land.* This excellent Earth deſerves a Character above many others, for its being a pure Virgin Earth, of a ſweet Nature, and of drying ſhort Parts: Its Services are too many to be enumerated here, and therefore I intend, in a proper Month, to publiſh the Methods uſed by us in getting it out of the Ground, and the Application of it afterwards.

## CHAP. V.

### *Of* Artificial Graſſes, *for the Month of* May.

CLOVER.—Whether this is properly a Graſs, or Grain, as ſome have obſerved, it matters not to the Farmer, who has more Buſineſs with experimental Knowledge, than the ſpeculative Part of Botany; therefore we ſhall not here go beyond our Laſt, and quarrel with what is out of our Sphere; but let it ſuffice that, of a foreign Graſs, it is now become a moſt uſeful, natural one in *Great Britain* and *Ireland*, where it has been of prodigious Service theſe many Years paſt, in ſupplying thoſe Farmers with Graſs, who having before no Meadow-Land, and could not ſo much as milk one Cow for their Families, may now carry on a Dairy both of Butter and Cheeſe, *&c.* by Means of this and other artificial Graſſes, which grow in Plowed-grounds. And as the Profit of a plentiful Crop depends in a great Meaſure on the Goodneſs of the Seed, I ſhall here give you ſome uſeful Hints, which may help you in making a right Choice of the true Sort.

*How to know good from bad Clover-Seed.* The purple Sort of this is that which had its due Maturation in the Field, and an Eſcape from the Heat and Burning of a damp Mow; and is therefore the right true Seed, which ought always to be coveted, and ſown by thoſe who hope for ſucceſsful Returns from ſowing it: This is, truly, that Part which is beſt of all the three Sorts, and is the Medium of the two Extremes. The white or green Sort is the unripe Part, and miſſed of that Benefit in the Field, which the Purple had; for in the Ear or Head of this Graſs, as well as in Wheat and other Grains, this Seed has its

its ſeveral Aſpects and Proportions of Bigneſs, before it is cut down, and will ſhew their Differences accordingly after Thraſhing and Cleaning: Where then this white or green Sort is in a large Quantity, it is to be rejected; for, though ſuch Seed may take Root and grow, it will prove diminutive Graſs, and be ſooner overcome by the Froſts and Wets, or Droughts, Worms, *&c.* than the fine purple Sort. The reddiſh Sort is the worſt of all; though this might be as good as the beſt, when it was brought out of the Field, but was afterwards too much heated or burned in the Mow, which occaſions its reddiſh Colour, and deſtroys in a great Meaſure the vegetative Part of the Seed. From whence I conclude that, where Clover-Seed abounds moſt with the large purple Sort, it is then ſo much the more valuable: But, for a farther Proof of the Goodneſs of this Seed, heat a Shovel half red hot, and put ſome Seed into it, the good will ſnap, and the bad will burn away. Kiln-dry'd Clover-Seed may be diſcovered by its igneous Smell.

*The Manner of its Growth.*— It commonly comes up in a Week's Time, if the Weather is favourable, and then it appears with two Leaves and its Seed on its Head; theſe all rot away in about three Weeks Time, and then the Spear, which ſhot from the middle between the two firſt Leaves, opens itſelf into three new Leaves, which ſtand all good. Old Seed is longer taking Root, and its Leaves bitterer than thoſe from new Seed.

*To ſow Clover-Seed with Succeſs.*— If it is ſown on rough clotty Ground, never harrow it in with Iron-Tines, becauſe this Seed, being very ſmall, will eaſily be buried in ſuch an uneven Surface, and never come to Perfection, at leaſt great Part of it will in courſe be loſt. The beſt Way, therefore, in ſuch a Caſe, is to draw white or black Thorn-Buſhes pretty thick

thick through the Sloats of a Gate or Hurdle, and, if there be Occaſion, let the ſame be loaded with a heavy Piece of Wood; then let a Horſe draw it length-ways, and acroſs ſeveral Times over ſuch Ground, as ſoon as the Seed is ſown. But, if your Land is in a fine Tilth, then you may be free with your Harrow-Tines, and harrow it in once in a Place, for in ſuch looſe Earth there is no great Danger of burying the Seed too deep; yet there is a fatal Accident ſometimes attends even this Management; and that is, when heavy Rains preſently ſucceed the ſowing of Clover in ſuch fine Mould, the Surface is apt to become what we call *Capped*, or, to be more plain, made to run and waſh one Part over the other, and ſo cake and bind the ſame, that the Clover-Sprout can't make its Way through its cruſty Top: In this Caſe alſo, the Buſh-Gate or Hurdle is perfectly neceſſary to be drawn over ſuch Ground, in order to looſen it, and make Way for the ſeedling Heads to get an eaſy Paſſage into the Air. But obſerve, that this Work muſt be done before the Leaves appear, elſe it may prove of very ill Conſequence: Obſerve likewiſe, that, if ſuch heavy Rains come later than five Days, the Ground will not cap or bind.

*A ſecond ſafe Way to ſow Clover to a great Improvement.*— Before or about *Chriſtmas* at fartheſt, lay your rotten Dung on your Wheat or Barley-Stubbles in the *Chilturn* Fields, and give them a clean Plowing, either in Broad-Lands, or four-thoroughed Stitches, which will thus invelope the Dreſſing, and by the Help of the Winter Weather, help to rot and mix it with the Earth againſt ſowing-Time; then, about the Middle of *February*, plow it again, and after it has lain a Month, firſt harrow it plain, then plow it acroſs, and harrow in your Oats and Clover-Seed. But obſerve, that I ſuppoſe the Soil, to be thus

thus managed in a ſtiff Ground, either Clay or Loam, otherwiſe there is no Occaſion for three Times plowing it, to get it into a ſweet Tilth; for a Gravel, Chalk, or Sand, muſt not have above two Plowings at moſt, becauſe theſe will often do better with one Plowing, than a ſtiff Earth with two: However, this ought to be received as a general Rule, That all Ground muſt be made firſt very fine and ſweet, if you expect Succeſs in ſowing any Manner of Graſs-Seeds. And here it may be asked, Why Oats ſhould be preferable to any other Grain for this Purpoſe? In anſwer to which, the Reaſons I think are obvious, as they are a hardy Grain, afford a good Shade, and better able to withſtand the Suction of the Clover-Roots; and if the Oats, in a wet Summer, ſhould chance to ſuffer by them, the Loſs will not be ſo great as in Wheat, or Barley; and, for this Purpoſe, I chuſe the black Oat before the large, white, *Poland* Sort, by Reaſon the latter is ſuch a vaſt Peeler or Robber of the Ground, that, when the Crop is got off, the Land is left impoveriſhed, and the Clover ſometimes ſo crippled and ſtunted, as to yield no more than half a Burthen. It is on this Account that I am for having ſuch Ground well dunged before-hand, not only to hollow it for the better Reception of the Seed, but to nouriſh the Clover the Year following, as well as to make it produce a very good Crop of Oats: With ſuch Aſſiſtance, the Clover will enjoy ſeveral Benefits; as getting an early Heat in the Spring-Time to ſhade its Roots againſt a dry Summer; and, if the ſecond-Crop is ſaved for Seed, it will be larger-bodied, and ſooner fit to mow. I am very ſenſible that the white Oat is chiefly recommended by the learned Mr. *Worlige*, for this Purpoſe, as giving a greater Shelter, by its broad Leaves, to the Clover than other Oats; but if you ſow (as you ought to do in all ſtiff Soils) four Buſh-

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els of black Oats on one Acre with the Clover Seed, you need fear no Misfortune from that Quarter: I have experienced both Ways, and therefore think I have a Right to know the Difference beyond this Author, who I never underſtood was a Farmer, or concerned further in the Occupation of Land, than that of a Garden; yet, to do him Juſtice, I muſt own, his Eſſays on Vegetation, *&c.* have been very ſerviceable to the World. At this Time I am feeding my Horſes in a Field of Clover, which I obtained after the following Manner.

*A third Way.*—It was on a ſtiff Soil, that I had a Crop of Wheat grew, and in *November* I plowed up its Stubble, letting it lie till the latter End of *February*, when I plowed the ſame Ground again, and ſowed it with about two Thirds Horſe-Beans, and one Horn-grey Peaſe, and twelve Pounds of Clover on an Acre, and it proved a good Crop. Here I obſerved that Clover does more Good than Harm to this Grain, as it helps to ſhade its Roots againſt Droughts, and thereby furthers its Growth; nor can the Roots of the Clover damage thoſe of the Peaſe or Beans, by drawing out the Goodneſs of the Earth from them, becauſe the latter, being much larger, have certainly the greater Suction from the Earth; yet both contribute to nouriſh each other, the Beans and Peaſe by ſhading the Clover, and the Clover them, and thereby making a Lodgment of the Dews, and retaining them afterwards, to their great Improvement.

*A fourth Way.*— About *Watford*, where they pay twenty Shillings *per* Acre a Year for their Plowed-Land, they have ſuch a Regard to the Improvement of this noble Graſs, that, after the Barley is carried off, which the Clover was ſowed amongſt, they get large Quantities of *London* Coal-Aſhes,

Aſhes, and lay them in a few large Heaps in ſeveral Parts of a great Field in *September*; then in *October* they turn in thoſe Sheep, which a little before were put into their Stubble-fields to fatten, and by this Opportunity they continue feeding them 'till their Turneps are ready, which compleats them for the Butcher; then, about *Chriſtmas*, they ſow their Aſhes on the Clover, which gives it thoſe Benefits I have before-mentioned.

*The pernicious Effects of ſowing Clover too early amongſt Wheat.* This Seed for many Years has been cuſtomarily ſown amongſt Wheat about *Chriſtmas*, or in ſome of the following Months 'till *April*, by ſowing it broad-caſt, and doing nothing elſe to it; Some again will draw a Buſhed-hurdle over it, inſtead of the Harrows: Others will roll it in; However, all theſe Ways are to anſwer one Purpoſe; But what I have here to alledge againſt this early Sowing of it is, that it often ſpoils or hurts the Wheat-Crop, by the great Suction it makes in Tilths and well dreſſed Grounds, in which this capital Grain is commonly ſown; eſpecially if a wet Summer ſucceeds; for then it radicates itſelf with great Expedition, and grows more than ordinary luxuriant.

A certain great Farmer near me, who was praiſing the fine Appearance his Crop of Wheat made in *April*, to an old judicious Neighbour, was told by the latter, ſhaking his Head, that he believed he would be of another Mind before Harveſt: The other asked him Why? Becauſe, *ſays he*, the Clover you have juſt ſown amongſt it, in the Winter, will very likely cripple it by that Time, and diſappoint your Hopes: And accordingly it fell out ſo to his great Diſadvantage: And this will appear no Wonder, if a Perſon does but reflect a little, and conſult his own Reaſon upon the Matter, for it is plain to the Farmer, that the Roots

of the Wheat, compoſed of ſmall Fibres, as it were in the Bunch, get their Living very near the Surface of the Earth, which the Clover muſt alſo do in its firſt Summer's Growth; and though its Seed is about one twentieth Part ſmaller than a Grain of Wheat, yet its Root is twenty Times bigger the ſecond Year, than that of Wheat, which in my humble Opinion plainly accounts for the Damage. As therefore I have cautioned my Reader, in laſt Month, againſt the Miſchief Clover does, if ſown too ſoon among Barley, I here likewiſe do the ſame in Relation to Wheat: To prevent which, if you have not ſown it in *March* or *April*, the very Beginning of this Month, ſow fourteen Pounds of Clover-Seed on one Acre; and thus you are not in ſo much Danger of ſuffering by Froſts as before, nor, it is to be hoped, by great Rains, which are apt to kill the Clover as it is chipping and making its Way out of the Hull or Shell. The Winds and Sun are alſo now leſs capable of hurting it, by the high Growth the Wheat is at in this Month, which thereby keeps the Ground moiſt, and hollows it ready for the Reception of this ſmall Seed. It likewiſe intitles the Farmer to this Benefit, that whereas, there being now not three Months to Harveſt, the Clover has not Time to be any ways deſtructive to the Wheat. Theſe are experienced Caſes, which were never before publiſhed. On the contrary, a certain late Writer on Husbandry, peremptorily affirms ſeveral Matters concerning this very uſeful Vegetable, which are intirely erroneous; I ſhall here mention but two, and they are as follow:

*A printed Error relating to Clover.* The aforeſaid Author affirms, that a Field of Clover will hold good five or ſix Years. Now, how wrong this is, every Farmer muſt be ſenſible of, who has had but ſmall Experience in this Matter. I think I may preſume to ſay, I am allowed by my Neighbours,

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to have as good Fortune in Crops of this Grass, as any about me, having at this Time five Fields under Growth of it; and yet I could never find that Clover ever paid above two Years, whether mowed or fed.

*A second Error.* He likewise asserts, that, after Clover has been done with, the Ground will bear Crops of Wheat for two or three Years together, and after that a Crop of Oats, without any Manure. This is fine Ground indeed, such as I never met with in all my Travels; and yet I have several good loamy Fields, that would let for twenty Shillings an Acre a Year, for the Plough; but could never find that it would produce me a plentiful Crop of Wheat or Barley, even the first Year, without the Assistance of the Fold, Dung, Soot, or some other Manure. However, there must be Allowance given for writing on Agriculture in a *London* Chamber; because all the Philosophy that it can furnish, will never come up to the Information of Field Experiments.

*The new Method of making Clover Hay.* The latter End of this Month, or the beginning of *June*, Clover is fit for Mowing, and known by its being full knotted and red-headed; and it is then you should begin this Work; for there is a Crisis of Time to be observed in this, as well as for natural Grasses. If you mow it too soon, it will shrink and lose in Quantity; and, if it stands too long, you will be deprived of its best Quality, the Sap; and then consequently it will be very coarse, and want much of its due Value. My Way of making it is thus: After it has lain a Day or two in the Swarths as it was mown, the next Time I remove its first Situation, by turning the Swarths; and letting it lie so another Day; then I put it in Grass Cocks in Rows, that the Ground between them may be regularly raked; then I afterwards

turn them with the Fork topſy-turvy twice a Day, 'till the Hay is intirely made. By this Method your will have it in its due Perfection of Colour and Sweetneſs with the Leaves on; but you muſt not expect this latter Benefit, if you make this Hay after the common Way of throwing and ſpreading it ſeveral Times, as is done in making the natural Sort; becauſe then it would be deprived of its leafy and ſecond beſt principal Part. In the next Place, when you inn it, and it ſhould happen to be wet Weather, or that you miſtruſt a Dampneſs in it, put a Tub, Basket, or hollow Square made of four narrow Boards four or ſix Feet long nailed together, and placed in the Middle of the Cock, or Stack of Hay abroad, or in the Mow in the Barn, pulling it up higher as the Cock, Stack, or Mow fills in; and thus you will not only prevent its Firing, but keep it ſweet; and indeed it is a good Way to uſe this Method always, let the Hay be ever ſo dry, becauſe it gives an Evacuation to all Moiſture, and tends very much to the Preſervation of its green Colour. If you intend the ſecond Crop for Seed, do not feed it after the firſt Mowing.

*The Nature of Trefoil, and making it into Hay.* This yellow-flowered Graſs, if the Spring is not very backward, we commonly mow in this Month, or the Beginning of next, either when it grows alone, or with the Clover and Ray-graſs: If in the latter Way, and it is fed, it prevents the Clover from hoving the Cattle; if for Hay, it tends very much to the Improvement of the other two, for this will twiſt and wind about the Clover, and help to keep its Leaves on, when it is made into Hay; ſo likewiſe is the Clover no leſs ſerviceable in its Place; for, if you thraſh the Trefoil and Ray-graſs with the Clover for Seed in the Field or Barn, the firſt two will preſently yield their Seed,

Seed, when the latter will retain it, and thereby, with its brown Honey-ſuckle Head, ſo improve their Stalks, as to make them the better Hay or Clover. Obſerve alſo that whether you mow Trefoil for Seed or Hay, it is beſt made in Graſs-Cocks, as I have before directed for Clover; becauſe its Seed (which it moſt eaſily parts with) is better preſerved; and it is for this Reaſon Trefoil ſhould never be fully ripe, when it is mown; and, when it is mowed alone, this Graſs does not require ſo much making as other Graſſes. It is a very fattening Hay for all Sorts of Cattle, and ſo is its Graſs; and in particular very ſerviceable to Cows and Ewes in producing a great deal of ſweet, yellowiſh Milk and Butter; for which good Qualities it is by ſome called *Noneſuch*: But after *Midſummer*, or the firſt Crop is off, it grows very ſlow, and makes but a ſmall Return, and is apt, when grown old, to make the Butter bitteriſh. This Trefoil has likewiſe a ſingular Quality different from all others; for if you mow it and plow the ſame Ground ſeveral Times, and ſow it with Corn, it very rarely happens, that you miſs of having a thicker Crop the Summer following, than when you firſt ſowed the Trefoil Seed; but, if you plow only once before you ſow the Grain, it is a great Chance if you don't intirely deſtroy it. Folding Sheep after the Ground is plowed will likewiſe prevent the Regrowth of the Trefoil, as well as only one Plowing: And, if this is not ſo ſerved, it is very apt to ſpoil the ſucceeding Crop of Wheat by its luxuriant Growth, eſpecially where there is a good Tilth made, and the Ground well dunged. And here I muſt praiſe our *Hertfordſhire* Farmer for his diſcreet Sowing of this Seed in its black Hull, as well as diſcommend the common Method of ſowing it naked; for Experience ſhews that the outward Coat or Hull ſecures it very much againſt the

the Rigour of Froſts, Wets, Winds, and Slights, inaſmuch as it will withſtand a whole Winter's and Summer's Revolution of Weather under ſeveral Plowings, and yet remain unhurt. In the common Way, Trefoil-graſs laſts but two Years, hollows Ground much, and will ſhoot two or three Times in a wet Summer; but in a dry one, little more than one full Crop. It will grow on a rough Tilth, and not hurt the Oats which it is ſowed amongſt; becauſe the Ground not being manured for this Grain, prevents the Trefoil from doing the Miſchief.

*The Nature of St.* Foyne, *and making it into Hay:* This red-headed ſerviceable Graſs is rarely fit to mow for Hay in this Month, but in *June* at fartheſt, and in *June* or *July* for Seed: If for Hay, the next Day we turn two Swarths Head to Head, and rake between the Rows; the Day following we put it into little Graſs-cocks, and turn them twice a Day till made enough. Others again, in making this Hay, follow the ſame Method as they do in making natural Hay. But if this, or Trefoil, or Ray-graſs, is much toſt or tumbled about, when it is mowed for Seed, it will be very ſubject to ſhed and loſe a conſiderable deal. This St. *Foyne* Hay is ſo nouriſhing, that draught Horſes may work under it alone, and will alſo keep them in good Caſe without any other Feed. It is always a ſure Crop, even in the drieſt Seaſons; and, when natural Graſs is burnt up, this will be a vaſt Burthen, and yield ſometimes three Loads on an Acre, which we commonly ſell for twenty-five Shillings a Load out of the Field. Now when it happens that St. *Foyne*, Clover, Trefoil, Ray-graſs, or Lucern is got in dampiſh, ſome, beſides the Uſe of the Tub or long Square that I have before-mentioned, will put Straw between the Layers of Hay as it is mowing in the Barn, or in a Cock or

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Stack abroad, or, inſtead of that, Chaff, in order to abſorb the Humidity, and prevent its Firing; but then there is an Inconveniency attending it, becauſe, if the Hay is to be ſold, ſuch Stuff will be apt to hinder its Value; however, of the two Evils, Chaff does the leaſt Harm, on Account of its ſmall Body, which makes it the fitter to eat with the Hay. When the red Head appears, mow this Graſs, while the full Sap is in it, for, if it ſtands, till it is full ripe, the Sap and Heart will be ſpent.

*Lucern, its Nature and Hay.* This Graſs, which of late has employed the Pen of certain Authors in its Praiſe, ſeems now to decline in its Reputation; becauſe not only myſelf, but many others have tried to get full Crops of it in our Clays, ſtiff Loams and Gravels, but without Succeſs. Yet a Gentleman near me ſowed a whole Field of it that had a loamy Surface, of about eighteen Inches Staple, under which was a red Clay; in this it grew, and in the third Year he mowed it three Times in one Summer, but could never do ſo before or afterwards, though he dreſſed it three Years together directly after Sowing: The firſt Year was with Dung, next with Lime, and the laſt with Aſhes; but after the third Year it declined ſo much, that in about five Years the natural Graſs got up and ſpoiled moſt of it. Beſides, at beſt, it makes but a coarſe Hay, which we cure in the Field, in the ſame Manner Clover-Hay is done; nor is it much leſs free from the fatal hoving Quality, than Clover is, for, if you turn Cows or Sheep into a Field of either of theſe Graſſes, they are liable to be killed by it: And by the Obſervations I have made of it, I think it will not proſper in any Ground that has a ſtiff or hard Bottom; but in looſe Sands, and in hollow mooriſh Earths, where its long piky Roots can make a deep

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and eaſy Penetration, it will do well, according to the Proofs I have known made of it in a ſandy Soil in *Norfolk*, and in a mooriſh Ground elſewhere: Which latter Caſe I intend to publiſh in a proper Month.

*Of Artificial Graſſes in general, and their Hay.* That St. *Foyne* and Clover which was ſown together the firſt Year among Barley or other Corn, in order to have a full Crop of both the Year following, the latter End of *May* is to be mowed and made together. This is a late Improvement, and we find that each Graſs aſſiſts the other in their Growth by the Shade of their Roots, 'till the Clover is worn out, and the St. *Foyne* then grows intirely alone. But when the Clover, Trefoil, and Ray-graſs are ſown together (as they often are) they then make the better Hay, and will laſt good two Years, if in the laſt you manure it with Aſhes, Lime, or rotten Dung; for in three Years the Trefoil and Ray-graſs will get the Aſcendant of the Clover, and cauſe but little of it to appear. Clover alſo is a Graſs which ſuffers very much by the Bite of Sheep, becauſe they cut its ſucculent Stalks ſo cloſe with their narrow Mouths, that, in this and the other Summer Months, they make them bleed or run out their Sap too plentifully, and ſo damage both the firſt and ſecond Crop of it. In this Month you muſt determine whether you will ſave your ſecond Crop of Clover for Seed; for then, as I ſaid before, it muſt not be fed. Some, by thus ſaving the Seed, have got a conſiderable Profit by it; but I knew a Farmer, that, after he had ſaved one Crop of Seed, would never do ſo again, alledging theſe Reaſons for it, that, after once or twice Feeding, the Horſes would eat no more of its Stover, but would ſooner ſtarve than feed on its hollow huſky Stalks; likewiſe the great Charge of thraſhing it (for he had not the Conveniency

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of Milling it) proved another Diſcouragement; ſo that he judged no Way ſo advantageous as feeding it, or making it into Hay, for then it ſometimes yields three Loads off an Acre, as I experienced in one of my Fields in the Summer 1735, at twice mowing it; and, whenever you make Hay of Clover, it requires your Patience that you may not hurry it in too ſoon, before it is made enough; for this Graſs, rather more than others, is very ſubject to a great Sweat in the Mow, when inned in the beſt Manner, by Reaſon of the large Quantity of Sap contained in its ſucculent Stalks. My next Neighbour was from *Monday* to *Saturday* making a Field of Clover Hay, and then inning it, for fear of its taking more wet than it had; the Hay heated to that Degree, as made him throw ten Loads away for Dung: Whereas, had he waited till the *Monday* following, he had ſaved all by the Clemency of the Weather; however, he ſaid he would truſt Providence better next Time, for it is far more preferable to ſpoil it in the Field, than in the Barn. *N. B.* Clover may be ſown in this Month with blue Peaſe, or any other of the forward Sorts, becauſe they do not continue on the Ground long enough to choak the Clover; but it will not do right, with *Windſor*-Grey, Horn-Grey, Maple, or the *Poplar*-pea, or any other of the latter Sorts, becauſe they are apt to choak the Clover, or the Clover them. And remember, that one Year's Clover ſours Ground, two ſweetens it, Clover hollows Ground, but Ray-Graſs faſtens, and ſours ſtiff Land.

*The Excellency of the Lady Finger-Graſs.*— This is a true natural Sort, that grows in my Upland-Meadows, on a loamy Surface, of about twelve Inches deep, under which is a red Clay of ten Feet Depth, and under that a Chalk, and is juſtly eſteemed the beſt of Graſs. Its Bloſſom is a yellow

Flower, and blows in this or next Month, much like that of a Furz or Whin, comes up with three Leaves with Trefoil, carries three Branches on each Stalk, grows about eighteen Inches high, and when ripe, is loaded with many ſmall Kidds, with certain Numbers of little Seeds near as big as a Till, and therefore is both Hay and Corn; and, being the ſweeteſt of Graſs, the Cattle eat it very greedily, which makes it in the higheſt Perfection, the moſt proper Hay for feeding Saddle-Horſes, Deer, Sheep, and Rabbits, in the Winter Seaſons, becauſe they'll not only eat it with Pleaſure, but it warms, dries, ſtrengthens, and fats them ſooner than all others. Wherefore, I recommend this particular Vegetable to the Notice and Enquiry of the Virtuoſo's of the Age; and, where Ability accompanies an improving Genius, this hitherto neglected Graſs may be obtained, by having its Seed gathered in next Month, clear of all other Seeds, and ſowed entire in moiſt or dry Loams or Gravels, and even in mooriſh Grounds; and, if it take well, there is no Doubt, but that it will, in a ten-fold Manner, compenſate the extraordinary Charge that muſt attend its Gathering, by Reaſon the Tread of the Collectors will conſequently damage, if not ſpoil the reſt of the Graſs-Crop. It is here I propoſe the Improvement of a true *Britiſh* Graſs, and not a foreign Sort, and humbly take Leave to be ſo far an Advocate for its Improvement, as to ſay there has been no Exotic Graſs-Seed ever yet imported, that is near ſo fine and ſerviceable as this native delicate Sort. I have lately tried Spurry-ſeed, which ſome Seedſmen would fain impoſe on the Public for a Graſs exceeding all others, and ſo in my Opinion it does (what I have experienced of it) for its worthleſs Nature. But here I publiſh one that has been approved of Time out of Mind

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by our Farmers, &c. who one and all allow its ſuperior Goodneſs in anſwering thoſe great Ends I here write of, and yet I can juſtly further enlarge on its tranſcendent Properties, by telling you it is moſt ſerviceable for keeping Sheep from rotting in wet Seaſons, and for inviting young Deer, Lambs, and other nice tender Beaſts, to eat it greedily in froſty or ſnowy Weather, to the Saving of many of their Lives. Hence, then, may be ſuppoſed, the great Benefits that conſequently may be enjoyed by ſowing this hardy luſcious Graſs-Seed in Parks, and other Places, inſtead of the harſh Ray-Graſs, which I have known done in ſeveral ſuch Incloſures, and which, indeed, affords an early good Seed in the Spring-Time; but, after the firſt Head is eat off, or when Midſummer is paſt, it grows harſh and ſtubbed, ſo that then no Cattle care to eat it; and, the older it is in Growth the coarſer and worſe it proves. Whereas this Lady Finger-Graſs holds good all Summer, and Winter likewiſe, if it happen to be a mild one. I have heard of a Gentleman, that ſowed entire Plaintain-Seed in a diſtant County from me, but what the Reſult was I know not; however, I have Reaſon to believe, it did not anſwer his Purpoſe, becauſe it can't be made to grow in ſo cloſe a Manner, as to enjoy a great Bulk of it in a little Compaſs of Ground, on Account of its ſpreading Bottom-Leaves, that clear all Graſs and Weeds about its ſingle Stalk, for two or three Inches round. But, how much it is worth while to ſow its Seed for its medicinal Qualities, I leave to the more learned Naturaliſt; yet I could wiſh I had leſs of it in ſome of my Ground, that abounds in a plentiful Degree with this Lady Finger-Graſs, which I annually ſell to one particular Gentleman for feeding his Deer. If hereafter any Perſon thinks fit to propagate this profitable

Graſs-Seed, they are welcome firſt to come and ſee it grow in this or next Month, and have it gather'd and rubbed out for tranſporting it to any Part, or, on due Notice and Encouragement, they may have it ſent them. But, for the Account of making natural Hay, and many other curious Matters relating to the ſame, that were never yet publiſhed by any Author, I refer you to my next Month of *June*, where I treat of them in a very ample Manner.

*How a Crop of Clover may be had the ſame Year.* If a Perſon is in Neceſſity to have a Crop of Clover the ſame Summer, he poſſibly may have a plentiful one to mow by the Beginning of *June*, if he ſows his Seed on a fine tilthed Earth, that is in good Heart in the Months of *February* or *March*; provided he ſows all over the ſame, as ſoon as the Seed is in the Ground, eight Buſhels of *Newbury* or *Hempſtead* Peat-Aſhes on one Acre, and there happen to fall ſufficient Rains afterwards in due Time. Or if, inſtead of the Aſhes, he ſows fifteen Buſhels of Soot, and have the Benefit of ſeaſonable Showers, he need not fear Clover enough the ſame Summer.

CHAP.

## CHAP. VI.

### *Of* Bulls, Cows, *and* Calves.

*To prevent Cows Hoving in Clover, and to cure them.* This is the moſt dangerous Month in the whole Year to hove Cows in Clover and Lucern, becauſe of their firſt going into theſe Graſſes, when they are in their greateſt Vigour of Youth. I make no more to do, than to fill an Egg-ſhell full of Tar, and force it down the Throat of each of my Cows, juſt before I turn them the firſt Time into Clover, and it never failed my Expectation: Becauſe the Tar, being of a hot, glutinous Nature, will lie ſome Time in their Bodies, and prove an Antidote againſt the Wind of a Bellyfull of Clover; and when this Graſs has paſſed through their Bodies a few Times, the Danger, in a great Meaſure, is over for that Year, provided the Cows be conſtantly kept on this Graſs. A poor Man's Cow, which he had brought up from a Calf, to eat Nettles in this Month 1741, eat ſo many in the Highway, that ſhe was hoved and ready to fall; but, by giving her Half a Pint of Gin, in as much Gunpowder as would lie on a Half-Crown out of a Horn, ſhe was preſently cured.

The *Eſſex*-men are allowed to be the niceſt and beſt Calf-ſucklers of all others, and that with a great deal of Reaſon, for, even in the Choice of a Bull, ſome of them are ſo curious, that they ſometimes will ride about fifty Miles an End to buy one, to their Mind, and accordingly travel into *Huntingdonſhire*, and other Places, to obtain the right Sort at Fairs there: For on this Choice depends the having of white Veal, and then the Seller may expect, at a brisk Market, five Shillings in twenty more than for one of the redder Sort of Fleſh, which

which always meet with a low Market. The Marks then of such a Bull are as follow:

*The Marks of a Bull to get white Calf's Flesh.* Chuse one that is thin of Flesh before; pale, yellowish, or dun-coloured, Finch-backed, white-bellied, brown-muzzled, his Head longish, his Eyes yellow or whitish, full, ready to start out of his Head, with pale-coloured Eye-lids, and Ears so within side, one or two Years old, and not too large. But a black Bull, with a brown List along his Back, likewise a deep red Bull are commonly reckoned bad for Breeding by, and more if they have black Eyes. About *London* they formerly bought a Bull at two Years old for about fifty Shillings, and, after using him one Year, they fatted and sold him for five or six Pounds; or, if at three Years old, he be gelt and made a Bull-Stag, he will be fatted in a Year, and sell for six or seven, if he is a large one. On *May*-Day I bought a two Year old Bull at *Winslow* Fair for a curious Gentleman, and, after the Bull had served his Cows all the Summer, he kill'd him fat out of his Ground in *Aylesbury-Vale* at *Michaelmas* following; for though some may keep him till he is more than three Years, yet it is rare, for, when a Bull comes to be four, he is heavy and sluggish, and then some geld him for feeding and fatting him; or, if he is drawn a Year or two after it, and then fatted, they will make the better Beef, hardly to be distinguish'd from that of an Ox. The old Verse says,

*He that will have his Farm full,*
*Must keep an old Cock and a young Bull.*

Of this I shall be more particular in my next Month.

*How particular Soils contribute to make Calf's Flesh white.* On *Gaddesden-Hill*, which contains many flat

flat Fields, whoſe Surfaces are a good Haſle Loam about eighteen Inches deep, as I ſaid before, we ſeldom have a white-fleſhed Calf; yet about four Miles Diſtance, and alſo a Mile and a half from me, in *Buckinghamſhire*, on their whitiſh, on their gravelly, and on their marly, blackiſh Loams they ſeldom fail of having them of a right Colour. Likewiſe, about ſeven Miles another Way in *Bedfordſhire*, on their reddiſh, ſandy Grounds, they genetally turn out with a reddiſh Fleſh.

*The Marks of a good Cow.*— On this depends a great deal of Judgment, and is ſo neceſſary to be known, that, without ſuch Skill, a Man goes to Market with a great Chance of laying out his Money very ill; for, if he is not very acute, I am ſure moſt of the Sellers are, and to look through the Eye, and ſpeak by the Tongue of another, is a Riſque that many would avoid, but cannot, by Reaſon of their Ignorance; therefore take the following Hints: Buy one that is Taper-headed, thin necked, well ſhouldered, ſhort-legged, red-coloured, if of the large Sort; but, if of the ſmall Sort, then the black *Welſh*, or *Scotch* Cow is beſt (according to my Account in *June*;) let her be thin-ſkinned, yellow, and thin-horned, her Bag linge, round, and thin-leathered, well chambered before, and her Teats not too large. Feel if her Milk-vein is large, if it is, ſhe commonly gives a great deal of Milk; a good Cow goes with Calf nine Months, and may go to Bull again in the tenth. A deep-bodied Cow is reckoned not ſo good a Milker as the more rounder-bodied, becauſe much of the Meat is expended in nouriſhing ſuch a deep large Body.

*Marks to chuſe a ſuckling Calf by, and its firſt Management.*— Thoſe who carry on this Suckling Buſineſs to Advantage, beſides the Calves of their own Fatting, muſt buy others to ſupply their Room when

when ſold off. Now the greateſt Market for this Purpoſe, within forty Miles of *London*, is *Leighton-Buzzard* in *Bedfordſhire*, that lies ſeven from *Gaddeſden*, which furniſhes ſuch Choice of theſe Creatures, that many of them are carried from thence into *Eſſex*, to fatten them for the *London* Butcher. And there is a conſiderable Advantage depending on buying thoſe who are moſt likely to thrive faſt, and die white: Take Care that it be of a pale red Colour, well ſhanked, and well loined, with a brown or mealy Muzzle, and a whitiſh Gum; his Barbs, which are like ſo many Prickles within-ſide the Jaw-Skin of each Side its Mouth, muſt be very white and ſhort, his Eyes haſle-coloured, with a whitiſh Circle about them, and a ſmall Rat-tail. But refuſe a black-eyed one, with black Hairs about it, that has a black Muzzle, a red Gum, long coarſe barbed, with a narrow Loin, ſmall-boned, and a thin lank Body, all which are reckoned as ſo many bad Signs, that he will not prove a kind one. The Heifer's Calf generally makes the whiteſt Veal, and, if fat, is preferred by the Butcher at ſeven or eight Weeks old, but is commonly of the ſmalleſt Sort. Some will chuſe large Calves to ſuckle, when others more judiciouſly refuſe them, becauſe they require a great deal of Milk, which, if you have not Plenty of, they will run into Bone, rather than Fleſh. The Bull Calves, for the moſt Part, are larger than the Cow Calves, but the Cow Sort frequently die whiter than the Bull Sort. In the Vale Grounds, where they calve Cows in the Fields, they commonly let the Calf go with the Cow a Week or two, before they ſell it, and by this it becomes fitter for driving along the Road, than one that is kept in the Houſe, which requires a great deal of Trouble to make it travel ten or twelve Miles a Day as the Drovers commonly do others. Therefore examine the Navel-Strings and

and, if it is green and tender, the Calf is lately fell; for this will not drop off till it is nine Days old, or more. Give the Calf (if it is very young) one Teat the firſt Week, two the next, and all the third or fourth Week; and then, if your Milk is ſhort, and you are obliged to cram, let it be once a Day, and only with two Crams at a Time, increaſing to three or four at a Time, twice a Day; ſo likewiſe mix but a little of the Anniſeed-water at firſt, and augment the Quantity as the Calf grows older. The Crams are generally given an Hour before Suckling. If you are to chuſe a Calf to wean, do not let it be a Heifer's, for it will make but a little Cow; but ſuch a Calf will wrinkle one or two Years later in the Horn, than one from an older Cow.

*To make Calves Fleſh white by Art*, &c. To bleed Calves often (as is too commonly done) is wrong; becauſe it takes them off their Food, makes their Fleſh eat dry, and not ſo ſweet as otherwiſe it would be. Some Men ſeldom bleed above twice, once about ſix Weeks old, and at about a Month's End afterwards. Bleeding, indeed, clears the Fat, and adds ſomething to its Colour, but not to the Fleſh; yet, to improve this in *Eſſex*, I obſerved, they have very compact Cow and Calf-houſes: For the firſt, they make them ſtand Tail to Tail, with an Interſpace of about four Feet, for the Men to paſs and repaſs, and, at their Heads, they have ſquare Pieces of Timber erected, with a Place to faſten their Heads in, by a Catch of Wood, that ſlips in at Top. On one Side of each Standing for three or four Cows, there is a ſquare Place for three or more looſe Calves to lie on Wheat-ſtraw, laid on Boards, which have ſeveral Holes in them, to diſcharge their Urine into a large hollow Place underneath them. In this ſame ſquare Place is a Rack, with large Chalk-ſtones for them to lick and eat at Pleaſure. Here alſo is a Trough ſet before the Calves, with

Barley-meat, mixed with a little Salt, for their Improvement. Others mix powdered Chalk, Wheat-flour, and Oatmeal. Others give white Oats, or yellow flit Peaſe. But, if Milk happen to be ſcarce, to make it go the farther, Cramming was invented, and may be managed with a great deal of Succeſs, if rightly ordered. To do which, mix fine Wheat-flour, powdered Chalk, Milk, and the beſt Anniſeed-water, which is far better than Gin, or common Spirits. Others will mix *Scotch* Oatmeal, ſifted fine, with Milk only, and give it in ſmall Balls four at a Time, dipped in Milk, an Hour before Suckling. Some, again, will give theſe an Hour after Suckling, with a few Spoonfuls of Milk after each Cram or Ball. And about *Beau-brickhill* in *Bedfordſhire*, which produces Fullers-earth, of late they have found, that this Earth, given in a Rack to ſucking Calves, nouriſhes and whitens their Fleſh more than Chalk. In *Hertfordſhire*, it is the general Opinion, that, if Hay is given them in a Rack, it will cauſe the Calves Fleſh to be red; yet I heard an old experienced *Eſſex-man* aver the contrary, alledging, that they may as well eat this, as the Wheat-ſtraw they lie on. But it is certain, that, if the Cows feed on Grains, Tills, or Thetches, their Fleſh will look red: Or, if the Calf is permitted to lick the Ground, Wall, or Boards about him, it will have the ſame Effect. The *Eſſex*-men never cram till three or four Weeks old, and ſeldom that but in Winter, when Milk is ſcarce; ſome of whom are ſo nice to have a Calf look white, that they bleed him in the laſt Week twice: But if his Barbs, Teeth, Gums, and Eyes appear white enough, they bleed him only once in that Time, and that is commonly the Day before they have the Calf to *Smithfield*-market. But, with theſe Artifices to ſave Milk and fatten (for it is the Opinion of many, that it makes the Fleſh worſe, than if all Milk is given)

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the Calves muſt be ſure to lie dry, as I have obſerved, or on a Foundation of Faggots, and then duly ſupplied, twice a Day, with Wheat-ſtraw, elſe they will be louſy and ſuffer. Others pretend, that it is beſt keeping Calves between two little Cocks of Straw in Winter, to make them ſweat, believing this Way forwards their Fattening; but this is not the Opinion of many, In mine, it rather retards their Thriving, by weakening them; however, this ſhould be obſerved, that, where a number of theſe Calves are ſuckled, there ſhould be two, if not three Calf-houſes, that the Eldeſt and Youngeſt may have their proper Opportunities of enjoying their Share of Milk, in proportion to their Age and Bigneſs. Before I conclude this Article, I ſhall add the following Receipt for making Crams.—Take the Flour of pale Malt and Chalk in fine Powder, of each equal Parts; mix both (with a very little Salt, or without it) Wheat-flour and Brandy, or Gin, or Anniſeed-water, into the Conſiſtence of Paſte or Dough; of which give three Crams, dipped in Milk, an Hour before each Suckling in Winter. But, in Summer, the ſpiritous Liquor is rather too hot for them, unleſs it be uſed in a very ſmall Quantity; which makes ſome therefore uſe only pale Malt ſifted, Wheat-flour, and Milk, for making Crams; and, by accuſtoming the Calf to this Food, he will voluntarily take the Cram off the End of a Stick. In *Hampſhire*, a Farmer let his ſuckling Calves lie Abroad under Cover, and made the fatteſt Calves of any, as believing Sweating hindered their Fattening, and that artificial Food likewiſe prevented their Fatting on the Kidnies. Another Farmer, when he has his Calves to *Smithfield*, makes up a Dough with Claret and Wheat-flour; and, if there be Occaſion, he gives three or four Crams, or more to the Calf, to keep it from ſinking, and hinder it from ſcouring. And the Butcher, to make it die

the whiter, commonly fasts it a Night before he kills it, for Reasons I shall shew in my next Month, where I shall treat on this Subject in a Manner that never was done before, by exposing many new and profitable Secrets relating to Calves.

*Of Weaning Calves.* In this or the proceeding Month, I buy my suckling Calves at *Leighton*, for five or six Shillings a-piece, about a Week old, to wean; for, the younger the better, because they will take the Finger the freer: However, at first they must be suckled a little, and by Degrees used to a flat Tub, or Bowl, wherein some Milk, has been put, and the Head of the Calf forced to it, with a Finger in its Mouth; and, when it has been used a Day or two to it, nail a Bit of Leather in the Middle of the Tub, to stand upright, in Imitation of a Dug; which in a little time it will take and nibble, and suck itself. Then, in a Week or two after, you may mix Water with the Milk, letting it have good Grazing all the while; and in about six Weeks, or two Months it will be weaned, and live altogether on Grass, with little or no Water, unless it be a very hot dry Summer, and short Grass. In the Winter following, it will be good Husbandry to let it have Hay in hard Weather; because good Keeping the first Year is the way to have them a Year forwarder, than those kept on Straw: So a Calf, weaned in *April* will wrinkle on the Horn, a Year sooner than one weaned late in Summer, and take Bull a Year sooner: But, in case you wean a Calf to keep for a Bull, take especial Care that none of the People learn him to be vicious; which too many of the younger Sort are very apt to do, by daring him with their Hats, and teasing him with several Postures, which teaches him old Tricks in his Youth, that they are apt too soon to acquire by their own savage Nature; therefore, in case you breed him, part with him at three Years old, or four at the furthest. Or, if you buy one in,

in, let it be at one, or two Years old at moſt, for Fear the like Cataſtrophe ſhould happen, which befel a poor Man, whoſe Name was *William Nore*, of *Ivingboe* in *Bucks*, who, being engaged as a Month's-man to a Farmer, in the Pariſh of *Whitchurch*, in the ſame County, was ſent one Morning to mow Haum or Stubble; but, it being very foggy Weather, he could not ſee a Herd-bull, till he was juſt at him, when he immediately attacked the Man very furiouſly, and the Man him, till he fought him ſo long as to bend his Scythe; at which Time, an accidental Perſon, coming by, made to the Man's Aſſiſtance; but the Bull, leaving the firſt, purſued the other Man, till, by outrunning him, he got ſafe into the Village, and raiſed the People, who when they came to the poor Man, he declared, that, to the beſt of his Knowledge, he had fought the Bull two Hours; but, being miſerably bruiſed by him, expired in a little Time after, and was buried at *Ivingboe*, the Twenty-firſt of *September*, 1735, for which, as I was informed, the Pariſh was fined. And, about the ſame Time, there was another Perſon gored to Death by a Bull, at *Stamford* in *Lincolnſhire*; and a third, mentioned in my next Month, with two particular Caſes relating to the ſame. But to return to my Subject: Do not houſe the Calf the firſt Winter, only keep it in an open Place, juſt to ſecure its Body from the Wet, and go in and out at Pleaſure; where, if to Hay you add now and then ſome Beans and Oats, or both, or other dry Meat, they won't be loſt, as may be proved by feeding one all the Winter with Straw, and then it will be a great Chance, if it is not louſy, ſcabby, and ſtunted, as I have ſeen done. And if you perceive the Calf to ſuck, or eat, with Difficulty, ſearch the Mouth; and if there be any Bliſters, cut them with Sciſſars, and then rub the Part with Bay-ſalt and Juice of Garlic mixed. The public Road, from *Leighton* to *London*,

*London*, joins some of my Fields, by which Droves of Cows and Calves pass every *Tuesday* for *Smithfield*; and once it happened, that a suckling Calf strayed into my Ground, and lived a Fortnight together, in the Summer-time, on Grass alone, without any Water, till the Owner claimed it; and I have weaned several, that have done well all the hot Season without Water.

*The* Welch *Way of fattening and weaning Calves.* They wean the Calf at a Week old, in order to enjoy as much Butter and Cheese, as they possibly can; and to make the most of the Calf, either to fatten for the Butcher, or to wean it. As soon, therefore, as it is taken from the Cow, they stir into a Parcel of skimmed Milk two or three Handfuls of Bean-flour, or, for Change, Oatmeal; which, by the Help of a Finger in the Calf's Mouth, it will greedily suck and drink it in; by which it will receive extraordinary Nourishment, and thrive apace: And thus they save the common Expence of suckling them with the Cow. But to be more particular: When they first wean it, they suckle it with the Finger four or five Times a Day, and lessen by Degrees, till it comes to twice a Day, and the Calf drinks of its own Accord; and this they do for six Weeks, or two Months: Then they sell it for Veal, or turn it to Grass, giving it now and then a little skimmed Milk, or Whey, to drink.

*Another Way.* The Calf lies on a Stage built high for the Urine to run off; and each Calf is fastened to a Post by a Collar and Swivel, allowing them only a small Length of Cord or Chain. Here they fat them, by putting a little Wad of Hay into Milk as big as one's Thumb; which the Calf will suck himself, else it must be put into his Mouth; and by this Means he will fat for the Butcher: Likewise, at two Months End, he is turned out to Grass for altogether. My next Neighbour weaned two Calves

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at a Time, at a Week old each, and at three Weeks End he turned them both out to Grass. One had skimmed Milk allowed it every Day, and thrived apace; the other at the same Time refused it, and fed altogether on Grass, but became very lean; but, when the former came to be kept only on Grass, he lost Flesh, as much as the other then gained it; however, they both made good Cows.

*To know if a Calf will die white, if only felt in the Dark.* On each Side the upper Part of the Tail or Rump in a fat Calf, there are always two Knobs or Bunches of Fat, which the Butcher commonly calls *Duds*. These you are to feel, and, if they are hard, it will die red; but, if tender, it dies white. A Bull-calf is seldom so fat behind as a Cow-calf. A Calf's Fat lies chiefly at the Bottom of his Shoulder, at the Udder, and at the Duds; and accordingly the Butcher feels these Parts, to know how fat it is. The thinner the Calf is on the Back and Shoulder, the more fat it has within Side.

*Grazing Cows.* The very Beginning of this Month, from *Gaddesden*, and many other Places in the *Chilturn* Country, are sent away old Cows, and also Guess-Cows (which latter are those that did not stand to their Bulling last Year) into the fertile Vale of *Aylesbury*, to fatten in grazing Grounds there at one Shilling or Fifteen-pence a Week, for twenty Weeks; for here their Turf is so extraordinary rich and sweet, that, if the Grass is ever so short, the Beast seldom misses of getting Fat, so they have Water enough. In this Month both natural and artificial Grasses are in Perfection for feeding Cows; and therefore, if they were not high enough in *April*, warily turn them into it now; and remember, that, if it is Clover, the younger it is, the more dangerous it will prove, because it is then most full of Sap and Wind: But, whether it be natural or artificial Grass, always let it be fed in small Parcels, for Change of Pasture

Paſture makes fat Calves, and then the Cattle are prevented from ſpoiling a great deal with their Trampling, enjoy it freſher, and it cauſes them to give the more Milk, obſerving it as a conſtant Rule, to ſhut up the Field before it is fed bare, that there may be ſome Shelter left for the Roots, againſt the ſcorching Heats; and that the Stalks may be leſs expoſed to Bleeding; or, in plainer Terms, to too great a Loſs of their Sap. Obſerve alſo, that in *Aylesbury*, and other Vales, it is too common a Practice to croud a Number of Sheep in the ſame Ground, with the Cows that are ſent there to fatten. In this Caſe, the Owner of ſuch Cows ought to be as wary as the Grazier is covetous, and refuſe ſuch a Place, becauſe a Sheep ſtains Ground the moſt of any Creature of its Bigneſs, and is therefore the moſt diſagreeable to the Cow, who hates to feed, wherever it dungs, ſtales, or leaves its oily Scent by lying on the Ground. Likewiſe in this Month, we *Chilturn* Farmers, who live near this Vale, whenever we have a good Cow, that at this Time of the Year is gone about half her Time with Calf, and our Keeping is ſhort, we commonly let her out for a ſmall Parcel of Money to a poor Man, who maintains her on his Right of Common, for the Sake of her Milk, till *Michaelmas* following, when ſhe is returned, and becomes a Winter Milch-Beaſt, that generally is full as profitable as the Summer one, where there is Plenty of Meat. In the next Place, I ſhould give an Account of the Profit of Milch-Cows; but, for want of Room in this and next Month, I muſt defer it till *July*.

*How two Cows died by ill Management after Calving.* In my laſt Month, I told you, that, if a Handful of Salt was ſtrewed on each Side of a Calf, as ſoon as it could be done after Calving, the Cow, by licking it, would ſpon glean: And now I proceed to inform you, that it has often cauſed her ſo

to

to do in two or three Hours Time, if ſhe is in Heart, as I every Year experience. Then milk her once or twice before the Calf ſucks, and give her the Milk to drink. It is a Fault to keep a Cow too well before ſhe calves, for then ſhe is apt to be ſo firm of Milk, as to endanger her Life; a Neighbour of mine had one in this Manner, that fell and died. Another fleſhy Cow calved well, but, upon the Owner's giving her half a Buſhel of Grains too ſoon, ſtocked her with ſo much Milk, that ſhe fell and died. This alſo will be the Effect of cold Water, if given to a Cow that has been kept before in the Houſe, the firſt Time after Calving; therefore we make it Blood-warm, twice or thrice, and put a Handful of Bran in each Pail. Now, to prevent the like Misfortune, give her dry Meat, a little at a Time, for the firſt two Days after Calving, to check the Milk, and hinder Danger. But when a Cow is poor, or in middling Order, there is no Occaſion for this Sort of Management. However, for a more particular Account of theſe Matters, I muſt refer you to my next Month, wherein I ſhall recite a curious Caſe, as it happened to a Cow in *April*, 1736. In the mean Time I ſhall here add the following Receipts, by Way of Supplement to thoſe mentioned in my former Treatiſe for *April*.

*A moſt excellent firſt Drink to be given a Cow after Calving, to keep her in Health.* I know ſeveral Sorts of Receipts that have been made Uſe of on this Account, and which I may mention in their proper Places: But there is none of them, for Cheapneſs, Readineſs, and Efficacy, ſo valuable as this, which I learned of an eminent Farmer in *Somerſetſhire*, where they run chiefly on Dairying; who being a perfect Stranger to me, and, as I was informed, Maſter of ſeveral rare Receipts, which he practiſed with Succeſs, I could not tell a better

Way to come by ſome of them, than to talk of ſome Improvements in Farming, which he liked ſo well, as to be free with me, and accordingly we exchanged ſome; and among the reſt he communicated this ſuperlative one to me, which I have ſince ſeveral Times tried, and never found it fail my Purpoſe, and is as follows: Boil a Point of Woodſoot in two Quarts of Ale till one Pint is conſumed, then add and mix half a Pound of freſh Butter with it, and give it altogether, when near cold, and out of a Horn, to the Cow, and, if there be great Occaſion, repeat the ſame at three Days End.— But my Way is to ſweep half a Pint of that Soot as lies over the Oven's Mouth, and boil this Quantity in three Points of ſtrong Beer or Ale, about fifteen Minutes; then add and mix a Quartern of Butter with it, and, when almoſt cold, put in a Pennyworth of Flour of Brimſtone; then let one Man hold the Cow by one Horn, and her Noſe, and the other give the whole Drink at ſeveral Times out of a Horn, one after another, as faſt as ſhe will take it.— This laſt is what I make Uſe of, and when any Inflammation in the Bag appears, which commonly is the Fore-runner of that deadly Diſeaſe, the Garget, I immediately give the Cow this Drink, and it always makes it, as it were, vaniſh away. The laſt Caſe of this Nature happened to an old Cow of my own, when Word was brought me, her Bag grew hard and very hot, and her Milk ſtringy, on which I gave her but one Drink, and heard no more Complaint. But this is abſolutely neceſſary to be given to all Cows in general, the third or fourth Day after Calving, by Way of Securing her Health *in futuro*; and ſo much Streſs is laid on this Prevention by moſt of the *Somerſetſhire* Dairy-men, that they ſeldom let one Cow miſs having it; and, ſince it has been thus in common Uſe, they tell me they are never troubled with a

ſnarled

ſnarled or inflamed Bag, nor any other Diſtemper ariſing from corrupted Blood, for that this Drink ſo purifies it, as to cauſe the Cow to give a moſt wholeſome Milk. Thus I have cured my Cows, when one or more Tets have been ſucked by the Hedge-Hog, which commonly cauſed Blood to follow, and a ſore Dug, The firſt went away by one or two Drinks, and the other by anointing with Hogs-lard.

*To make a Cow glean well, and keep her in Health afterwards.*— Take three Pints of Ale at leaſt, a Quarter of a Pound of Currants, the like Weight of fat Bacon minced ſmall, two or three Sprout-leaves, with a little Mint and Sage ſhred, and a little Handful of Oatmeal. Boil theſe together, and, when off the Fire, add a little Treacle. This is accounted a famous Receipt to heal a Cow's Body, not only in this Caſe, but alſo for reſtoring her Cud, and removing all Obſtructions of the Maw, which cauſe ſeveral Diſtempers. And as it is a Cuſtom with ſome to give all their Cows a cleanſing Drink after Calving, I recommend this to be a good one for that Purpoſe.— A ſecond is, to boil ſome Mugwort in three Pints of Ale, and, when almoſt cold, add a Pennyworth of Flour of Brimſtone, ſtrain off, and give the Liquor warm. A third is, to boil ſome Cabbage in a Pound of Bacon-Greaſe, and give it altogether.—— A fourth is, to boil a Quart of ground Malt in two Quarts of Ale, and give all warm. A certain Perſon gave this laſt to a Cow, which, on the third Day after Calving, had not gleaned; but in five Days after it came away whole. But, in ſome other of my Monthly Books, I ſhall diſcover a Capital Secret, how to make a Cow glean in an Hour's Time for a Wager.

*To dry Milch-Cows for Fatting.*— The Beginning of this Month being the common Time for putting Cows which are not with Calf into Grazing-grounds

to fatten: If they are not dry, dry them directly by bleeding each Cow in the Milk-vein. Others will do it by giving a Cow a Quart of old Verjuice once or twice, and it will make the Milk come away in Bits, and dry her on a ſudden; but the Bleeding is moſt commonly uſed as the ſafeſt Way, becauſe, as this Vein feeds the Milk-bag, the Milk is hereby checked, and that without Danger of a Gangrene enſuing: The Way of performing it is, by the common Phlegm-Inſtrument that Horſes are bled with, and is a much ſafer Method than cutting off the Teats for this Purpoſe, as I have known done. Yet, as a better Way than all others, ſome will bleed the Cow in the Neck well, then anoint her Bag all over with Turpentine and Tar mixed together, and turn her out for good. But the Graziers make no more to do, than to let a Cow go unmilked, four or five Days, till her Bag akes and ſhe mooes to be milked, then three Days after milk again, and three after that, and a Whey and Bits will come, and ſhe dry.

*The* Suffolk *Way to make a Cow take Bull.*—This County, it is well known, abounds with many Dairy-Farms, and is no leſs famous for their excellent Barrel-Butter, than they are for making the worſt of Cheeſe. When they ſell their Firkin-Butter for twenty-five Shillings, they eſteem it a topping Market; and as great Numbers of them chiefly truſt to a Butter-market for a Livelihood, it more than ordinary concerns them to have their Cows calve at ſuch a ſeaſonable Time, as to enjoy the Graſs in its full Perfection, otherwiſe it would prove a very great Prejudice to the Farmer, if he is obliged to feed dryiſh Cows on an early Bite. Beſides, by having a new milched Beaſt forward in her Milk, the Owner is enabled to have the Benefit of the firſt Butter-market; to do which effectually, they have of late found out a Way to make a Cow take Bull at a

deſired

deſired Time, thus: Let one Man hold the Cow by the Horn and Noſe, while another gives her a Quart of ſtrong Ale, or better ſo much ſtout Beer, out of a Horn, and in an Hour's Time drive her to the Bull.

*The* Cheſhire *Way.*—This fertile Country is no leſs known for its famous Cheeſe, then *Suffolk* is for its Butter; and, for the foregoing Reaſons, are obliged to ſtudy the Enjoyment of an early Milch-Cow. They therefore give half a Pint of Brandy or Gin at once, out of a Horn, and, at twenty-four Hours End, drive her to the Bull. And, to make a Cow ſtand to her Bulling, in next Month I ſhall tell you three ſeveral Ways, as they have been practiſed with Succeſs.

*To feed Cows with Ray-graſs in Racks.*—In this Month ſome mow Ray-graſs, and give it to Cows in Racks daily.

*To mow it for Hay.*—The latter End of this Month I ſaw Ray-graſs laid in a chalky Soil near *Wincheſter*, fit to mow. In rich Grounds it has been mowed twice in a Summer.

*Rye to be mowed for Cattle.*—By *Windſor* they mow it the latter End of *April* or Beginning of *May*, to give it to Cows and Horſes in Racks. It is good to ſcour Saddle-Horſes.

*To feed Cows with Clover out of Racks.*—This Way I follow myſelf moſt Part of the Summer, by contriving to have a near Field ſowed with Clover-ſeed, for then we can mow it daily, and bring it Home with more Eaſe; a diſtant Field, therefore, is not proper for this Undertaking; but, when we enjoy Clover out of Home Cloſes, by giving it to Cows in Racks under Cover, it prevents the common Danger of Hoving, Spoiling great Quantities of Graſs by the Tread of their Feet and their Dung; the Torment of Flies, and the too great Heat of the Sun; the Fatigue of driving them to the Field,

and

and the Riſque of the Cows breaking into Neighbours Ground. Inſtead of which Diſaſters, that are incident to Cows grazing on Clover in the Field, we obtain great Quantities of Dung at Home, and employ our offal Straw to the beſt Advantage, large Quantities of Milk, and the Fattening of Beaſts at the ſame Time, in the quickeſt Manner. Hogs alſo will feed on the Orts of Clover, as it falls from the Cows Racks, and go a conſiderable Way in the Subſiſtance of Store-Swine. One Acre of Clover, fed this Way, is thought to go as far as ſome ſix of natural Graſs fed in the common Way, and as far again, at leaſt, as Clover fed with Beaſts in the Field.

## CHAP. VII.

### *Of* Cheeſe.

IT is certain that there is a great Difference in Grounds, in Cattle, in Graſſes, and in Management, as they all relate to the making good and bad Cheeſe. Some natural Graſs will have Cheeſe, when others won't, as will moſt of the artificial Sorts, namely, Clover, Lucern, and Cow-graſs, *&c.* Likewiſe, there are ſeveral Weeds or Herbs of ill Conſequence, as Melilot and Crow Garlick, that are ſuch ſtinking Vegetables, as oblige ſome Farmers to employ People to pull them up in this Month, to prevent their damaging the Butter, Cheeſe, and Corn, which they will be ſure to do, where they grow in too great Plenty and are let alone. The Cliver, or Rennet or Curd-wort, has a ſtrong ſtinking Smell, and is alſo pernicious in curdling Milk in the Cow's Bag; but they ſeldom eat it. Long Graſs likewiſe produces a watery Milk, that is much

much fitter to ſuckle Calves with, than for making Butter or Cheeſe, becauſe it does not afford ſo ſweet a Milk, nor yield ſo much Cream as the ſhorter Honey-Suckle, Lady's-finger, Wild-thetch, and ſome other of our Meadow Graſſes do. But this is not all, the Fault lies ſometimes in the Cow; ſome will give a thin blue Milk, when another will give a thick creamy Sort: However, this is ſurely true, that, let the Ground, Beaſt, or Graſs, be in their full Perfection, the Cheeſe may, and is, often ſpoiled by a bad Houſewife, as is annually proved in ſeveral of the *Leiceſterſhire* and *Warwickſhire* Dairies, where, when they had a good Servant, they had good Cheeſe, and, when a bad one came in her Room, they had as bad. A Neighbour of mine, who carried on a Butter and Cheeſe-Dairy, by the Help of Clover that grew on a hilly clayey Soil, uſed to have a Commodity that ſold tolerable well, while his Wife lived, but never after could get a Dairy-maid that was capable of making either of theſe, from ſo precarious a Graſs as Clover, though he changed ſeveral. In *Warwickſhire* and *Leiceſterſhire*, of late they ſow a great deal of Clover, by which, with the Help of Stover or dry Fodder, they can begin to make Cheeſe in *April*: But, as Clover and Stover are apt to make hollow rank Cheeſe, they carefully ſtrive to cure it, by ſalting the Curd a little the more; and yet, if it is ſalted too much, it will be dry and unpleaſant. Another Way they take to prevent this, is to put Water on the Rennet-bag, inſtead of Whey, and it will much help it. To this I add that neceſſary Precaution of breaking the Curd well, for this is a principal Matter, becauſe then it will let out the Whey eaſily, which otherwiſe, in ſome Degree, would remain in it, and cauſe the Cheeſe to taſte rank, and rot ſoon; for Bits of Curd miſſing, being broke, will infect the whole Cheeſe. The common Sort of Cheeſe, ſold in Shops,

Shops, is what they call *New-milk* Cheeſe, which, to anſwer the Appellation, ſhould be made with all new Milk; but this ſeldom happens, becauſe it is generally made with half ſkim, and half new; or what is more properly called *Two-meal* Cheeſe. Yet there are two worſe Sorts than this; one called *Three-meal* Cheeſe, that is made with two Parts ſkim, and one Part new, and the other with all Skim-milk, which latter is made in many Farmers Houſes for their own Family Uſe. I knew a Dairy-man that lived near *Lilly-Hoo*, who, when he ſold Butter for five Pence Half-penny *per* Pound, reckoned his true New-milk Cheeſe to ſtand him in three Pence Half-penny *per* Pound, and therefore ſold his own Cheeſe to ſome particular Cuſtomers, and bought, for his Family Uſe, what they called at *Baldock* Fair, *New-milk* Cheeſe, for two Pence a Pound. A Gentleman, willing to have the beſt of Cheeſe, beſpoke one to be made with all Cream; but he was anſwered by his Dairy-woman, that there was no ſuch thing to be done, becauſe the Curd would then be too ſhort to work, but that it might be done, with half Cream, and half new Milk.

*To make Rennet.*—Good Graſs cauſes a good Rennet-Bag; that may ſtill be made better, if the Calf ſucks about ſix Hours before it is killed, for then the Curd will be the newer, and the Bag muſt be got away as ſoon as can be, to be waſhed and ſcoured with Salt on both Sides, to make it ſweet and white. Then, after the Curd is cleaned and waſhed, it muſt be put in again to the Bag, with a Handful or two of Salt, and ſkewered up to lie in an earthern Pot, cloſe covered in a dry Place. When the Rennet is to be uſed, put ſome Salt into a Quart of Water, till it bears an Egg, and boil it; when cold, put it into the Bag, and let all lie in the Pot again. This Rennet will keep a Month good,

and,

and, to about sixteen Gallons of Milk, use two Spoonfuls of this Liquor. If the Milk is cold, it must be made near, but not quite so warm, over the Fire as it came from the Cow, lest it turn the Milk to curd too quick, and then the Cheese will be tough and hard; but, when they use the Milk directly from the Cow, they don't heat it at all. In very hot Weather, I knew a Man, who kept but four Cows, put all his Milk into one Tub, and immediately, out of a River just by, he took a Bucket of Water and threw it into the Milk, in order to temper it, and make the Curd soft; then he directly mixed his Rennet with it. My Servant takes the following Method: She recruits the Rennet-bag three or four Times a Year with fresh Brine, and, when she is about to make Cheese, she puts some Whey to stand all Night, and in the Morning she skims off a Sort of Cream; then takes her Rennet-bag out of her earthen Pot, and lets it lie two or three Days in this Whey; by this Time it is sufficiently tinctur'd with the Brine and curdling Nature of the Bag (which she never makes any Holes in, as some do) then she takes it out, and uses the Whey for Rennet, that will keep three or four Days or longer; and thus she proceeds all the Time she makes Cheese, for a few Cows, each Time throwing Salt on the Bag, to keep it sweet in the Pot, and as it grows weaker, through often Using, the more Rennet must be put into the Milk.

*The* Welch *Way of making Rennet.* In *Caermarthenshire*, the Women empty the Curd out of the Bag as soon as it comes from the Butcher, and, after cleansing it well from Hairs and Filth, she rubs it soundly with Salt, till she intirely clears it of all slimy Matter; then she washes it with Salt and warm Water, and lets it lie under Salt in a Pan a Day or two, when she mixes a Pint or Quart of Stroakings, with a Handful of Salt, and puts all in-

to the Bag; then she runs a Skewer through at Top, and hangs it up, with a Pan underneath, to catch the Brine. Now, to improve this Brine, she takes a Handful of an Herb called there, *Goose-tongue*, and not quite so much Fennel, two or three Rases of Ginger bruised, and a few Corns of *Jamaica* Pepper, and two Handfuls of Salt; these she boils in three Quarts of Water, till it is half consumed, stirring it well all the Time; then she strains it off, and, when cold, mixes it with the aforesaid Brine that dripped from the Bag, and thus she has a Rennet for making Cheese. Again, when she finds the Brine ceases to drop from the Bag, she puts a little more Milk and Salt into it, and when the Bag decays, which it generally does at a Year's End, she boils it in the Liquor to get the Vertue out of it. *Note*, if the Calf sucks the Cow before she has been milked two or three Times, it will not only damage the Calf, but render its Bag very unfit for the Rennet Use, by breeding a hard Curd in it. *Note also*, That the Goose-tongue Herb grows chiefly in marshy Grounds, is very hot on the Tongue, and bears a yellow Flower in this Month, with an indented Leaf of a longish Make somewhat like a Goose's-Tongue, that will not only help to preserve Cheese, but give it an agreeable Relish, as the *Welch* say.

*To make a bottled Rennet that will keep Cheese from hoving, and preserve it sound.* Put four Gallons of Whey into a Kettle, and, as it heats, throw a Handful or two of Salt into it, which will raise Curds, that, before it boils, must be all clean skimmed off. Then put into the remaining green Liquor some *May*-flowers, or Leaves, Boughs, or Bark of Blackthorn, and boil them in a Quarter of an Hour; when cold, strain off. In this put two or three Calves Bags, that have been kept some Time in a Pot of Brine, to lie three Days; then take them out,

out, and bottle up your Rennet well corked for Use. This is best made in the Months of *May* and *June*, and thus a Woman that kept but six Cows, made her Rennet for the whole Year. In some great Dairies they keep ten or twenty of these Rennet-bags in several Pots of Brine, that they may have them to use at a due Age; and, to preserve them in the Pots, they throw some Salt on their Tops now and then, as they lie in the Brine, which will still increase their turning Quality, and make them hold good the longer. Another makes bottled Rennet thus: Put one Pint of Whey into six Pints of Water, with a Handful of Salt and five Sage Leaves, boil all a Quarter of an Hour, when cold, put in the Bag, and let it stand four Days, then strain the Liquor into Bottles with a Dozen of Cloves.

*To make Cheese.* After the Rennet is stirred into the Milk in a Tub, in about half an Hour, more or less, it will become a Curd, which must be broke by gentle Degrees with a Skimming-dish, as equally every where as possible, for on this depends chiefly the making of good Cheese, otherwise you may expect it to be full of Holes and Eyes: Then put the Curd into a Cloth, and move it to and fro, Cloth and all, over the Cheese-Rack, and clear it of the Whey. When this is done, put the Curd and Cloth into a wooden Mould, or Cheese-vat, and a wooden Cover on that, and then press it, that the remaining Whey may run out through the Holes in the Vat: Next Morning take it out, and salt the Cheese all over, turn it, and put it into the Cheese-Press again; when it is stiff enough, take it out, and put it on a Shelf, where the Cheese must be turned often, and wiped with a coarse Cloth.

*To make* Cheshire *Cheese.*— Their Soil, in many Places, is of a marly, and some of a rich sandy

Nature, which bears a moſt excellent Graſs, that produces a rich Milk, and the beſt of Cheeſe. Here they break their Curd well with the Hand, and upon every Layer of Curd they ſprinkle a little Salt, and ſo on the Outſide at each Turning, which, after a Year's End, is fit to eat, but better if it is two or three Years old. I have eat this Sort in a very mellow pleaſant Condition, after it has lain ſome Time in a Wine-Vault on a Pipe of Sack; but better ſtill, when it has been fed with Sack, put into a Hole of it, which certainly improves this Sort of Cheeſe to a ſurprizing Degree of Richneſs. But, in ſome Parts of *Wales*, they make Cheeſe of Sheeps, Cows, and Goats Milk, that, they ſay, exceeds *Cheſhire* Cheeſe. Therefore in next Month I ſhall give you a very particular Account of making *Cheſhire* Cheeſe, and another to make Cheeſe with Sheeps Milk, that is ſold in *Cheſter* City for Six-pence a Pound, as it is made and brought there out of *Denbighſhire*.

*To make a very thin Cheeſe.*— To make this Cheeſe, ſome will fill the Cheeſe-vat with the Cloth and Curd; but, as it ſinks, fill it up with freſh Curd every Hour till Night; but never do this with the Hand, only with a Skimming-diſh. Next Morning they take it out, turn and ſalt it all over, then put it into the Cheeſe-vat again, and ſo on till it is ſtiff enough to take out for good. Then turn and wipe it on a Shelf Night and Morning; but, if it is late in the Year, ſome put this Sort of Cheeſe at Night in a Rack made for the Purpoſe, and in the Day-time on Shelves. When one Side is gently dried before the Fire, they turn the Rack without ſhifting the Cheeſe, till it is thoroughly dried. This thin Cheeſe, made with all new Milk, is ready to eat in a Month's Time.

*Marygold Cheeſe and Carrot Cheeſe.* It is made as others, only with this Difference, bruiſe or beat the

the ſmall yellow Flowers, and ſqueeze out their Juice, which muſt be mixed with the Curd, when broken, and ſtirred well into it. It is a rich Cordial Juice: And ſo the Carrots are to be beat, and the Juice ſqueezed out.

*Sage Cheeſe.* It is made like the reſt, only bruiſe Sage and Spinage together, and put the Juice in with the Rennet; the more Spinage, the leſs the Sage will taſte.

*To make a fine Cheeſe.* Take three Gallons of Stroakings, and put to it a Gallon of boiling Water, with a Quart of Cream; mix them well. If it be but the Stroakings of ten Cows, put in three Pints of Cream. When it is of a right Warmth, put in your Rennet, and, when it is come, cut it every Way with your Knife, and, letting it ſtand, it will ſettle itſelf without your Hands; then put it into a Cloth, and turn it every Way till the Whey be out of it. Then put it into the Vat or Mould, and preſs it half an Hour, at the End of which take it out, and ſet it in a Tub of cold Water in the Vat, and when it has lain here one Hour, put it again into the Preſs, in which let it ſtand one Hour; then take it out and ſalt it, and put it in the Preſs to ſtand till next Morning, when it muſt be put into a wet Cloth, changing it as often as it dries, and be ſure to keep the Cloths ſweet and wet. Set it in the coldeſt Place you can, and it will be ready in a Fortnight. If you make this Cheeſe in the Fall of the Leaf, it will be good till *Chriſtmas*, and longer; but then you muſt add more Milk, Cream, and Water in Proportion. *N. B.* If you make this Cheeſe early in the Spring, or at the Fall, then put your Rennet into it the hotter; but, if in Summer, as cold as it will come.

*To make Slipcoat or Cream Cheeſe.*— Take ſix Quarts of new Milk, a Pint of Cream, and a Spoonful of Rennet, and, after the Curd is come enough, take

take it gently from the Whey; then ſhake, or rather ſqueeze it tenderly in a Cloth over the Cheeſe-rack, and put all into a wooden Mould, and a Weight of three or four Pounds on its Cover. Next Morning take it out, ſalt and turn it, then put it into the Mould again, with the ſame Weight on, and at Night take it out for good. This Cheeſe muſt directly be laid on a Bed of Nettles or Ruſhes, or Aſh-Leaves, and covered with the ſame, ſhifting it twice a Day, for eight or nine Days, and then it will be ready for Eating.

*To make an excellent Cream Cheeſe.* *N. B.* Take two Quarts of ſweet Cream, ſet it over the Fire till it has boiled up; then take it off, and put to it four Quarts of Stroakings warm from the Cows, and when you have ſtirred it together, that it is not too hot, put into it two Spoonfuls of quick Rennet. When it is come, turn it whole into a Cloth, then whey it as you do any other Cheeſe, and, when it is come well together, put it into the Vat, and lay about ten Pound Weight upon it, only till you can turn it, which muſt be in an Hour or two; then take it out, and put it into freſh Cloths, till it will wet no more. Then ſalt it as you think fit, and let it lie out of the Preſs a Day or two, when you are to put it between two Pewter Diſhes, and turn it once a Day for three Weeks; then take it from between the Diſhes, and let it be four or five Days before you eat it.

*The* Montgomery *Way to make Cream Cheeſe.*—Take ſix Quarts of Stroakings, or new Milk, and one Quart of Cream; then put one Quart of boiling Water on it, and a Spoonful of Rennet, which cover very cloſe with Cloths. When it is come, whey it with a Skimming-Diſh, but have a Care of bruiſing the Curd too much; then turn it on a Cloth into the Cheeſe-vat, and let it lie under a ſix Pound Weight. Change your Cloth once in three

three Hours, but be sure not to let it be quite dry when you use it, lest it sticks. Lay Salt on the last Turning, and keep it in Grass near the Fire, with Flannels under and over it.

*To make a poor Cheese.* A certain Farmer who kept but three Cows, and made Butter, used to put a little Skim-milk to his Butter-milk, and make it into Cheese: Also, in some Parts of the *West*, where they carry on the hot Dairy, they make a poor Cheese with the Skim-milk that is commonly sold to the Tinners or Miners of *Cornwall*, for ten or fifteen Shillings a Hundred.

*To make a rich Cheese.* Mix half your Quantity of Cream with your Milk hot from the Cow. If six Gallons of Milk, there must be three Gallons of Cream. Stir them together, and put in as much boiling Spring-water, as will make all a little hotter than Milk from the Cow; then put in a Spoonful, or as much Rennet as will do. When the Curds are come enough, gather them from the Whey into a Cloth, and break them very small; then salt it, and put it into a Cloth again, and then into the Vat and Press for only two Hours. While this is doing, boil the Whey, and take out the Curds from it; then put the Cheese into this Whey to stand half an Hour, at the End of which, put it into the Press again, and, when it is enough done, roll the Cheese in Linnen very tight, and let it remain so fourteen Days, and turn it twice a Day for a Month. This rich Cheese is as well worth nine Pence a Pound at the Dairy, as Two-meal Cheese is three Pence: But even this Cheese is not to be made so good from long Vale Grass, as from the shorter and finer Sorts. If you first tincture this Cheese well with Mace, it will give it a very agreeable Taste.

*Several Directions to make sound Cheese, and preserve it so.* Take care you don't put too much Rennet to the Milk, for that will bring on the Curd too quick, and hove the Cheese. Likewise, if the Milk

Milk is too hot, when the Rennet is mixed with it, it will do the same. Now Rennet is also apt to bring on this Misfortune, and therefore some are so careful, to mix the new with the old: Or, if you are to use all new, keep it a Week before it is put to the Milk. Others, to prevent the Cheese's Hoving, will mix skim and new Milk together, which, with well breaking of the Curd before-hand in the Cheese-vat, and squeezing the Whey out clean, will answer the End. Others take a great deal of Care not to over-press it, lest it make the Cheese hard and unpalatable; though it is certain, that, by such hard Pressings, the Cheese will keep the longer. The forward made Cheese, in some Seasons, dry so fast, that they are forced to turn them often, and rub them, to keep off a blackish, nasty Coat, that otherwise would eat into them, and spoil their Sale. Some again, more nice, after they are rubbed and turned several Times, will butter their Outsides all over and keep them sound, and add a golden Colour to them. If the Summer is very hot and dry, put the Cheese into shady Places, and dry leisurely, for, if they dry too fast, it is apt to hove them, and make them full of little Holes. But in, and after *August*, they never fear this, nor that they will have a bad Coat. Others, to keep Cheese from rotting, will put Whey on two Rennet-bags, to the Quantity of a Gallon, which they let lie three Days, then draw out the Liquor, and boil it with some Bark of Black-thorn; when cold, either put it over the Rennet-bag, a little while, or, by adding some Salt to it, you may use it directly. You may give Cheese several Sorts of Relishes as you like best, by boiling sweet-briar-tops, or Mace, or other Spices, in the Brine or Rennet: But Mace alone is preferred by most. In this Month, in some Grounds, Cheese is very apt to hove, though the Cows are fed on natural Grass; and therefore, in some

ſome Dairies, they don't make their thick keeping Cheeſe till *June*. I know a Ground in a certain Vale, that, in dry Years eſpecially, runs into Knot-Graſs, or Clob-weed, wild Garlick, and ſome other pernicious Weeds, to that Degree, that, if they don't break the Curd very well with their Hands, after it is wheyed, and then cut it into Diamond-Pieces, and work it a ſecond Time, the Cheeſe will certainly prove ſpeeky and rot: Or, if they put a greater Quantity of Rennet into the Milk, than what by Experience they have found proper, it will ſurely hove the Cheeſe into a Puff and ſpoil it.

Somerſetſhire *Cheeſe*. They break the Curd as leiſurely, and as ſmall as poſſible, then drip out the Whey; with this Whey mix half Water, and heat it over a Fire between warm and ſcalding; then ſtrain it upon the dry Curd in a little Pail or Tub, and work it round with the Hand, and, after it has thus lain half an Hour till the Whey creams over, drip the Whey out and knead and bruiſe the Curd well; when ſo done, put it into a Cloth and then into the Vat, and preſs an Hour; then take it out and waſh the Cloth, and let it ſtand in the Preſs till the Evening, when it is to be taken out and ſalted on both Sides, and preſſed again till next Morning; then take it out and put it into a dry Cloth, and let it ſtand till the next Evening; now it is to be taken out from the Cloth, and let ſtand naked in the ſame Fat to ſmooth it all Night; next Morning take it and put it on a Shelf. *N. B.* The Whey and Water is to keep it from hoving.— In next Month I intend to give you a very particular Account how to make *Cheſhire* Cheeſe, and thirteen other Sorts, more than are here, that you may make that which beſt fits your Fancy.

*To turn Milk without Rennet*. A *French* Author ſays, that Carduus-ſeeds, the Spawn of a Pike, the Juice of the Fig-tree, Ginger, the inner Skin of

a Hen's Stomach, or the Flowers of Thistles or Artichokes, are of so sour a Nature, as to turn Milk into Curd: But the most natural Thing of all others for this Purpose, is certainly the Maw of a suckling Calf or Kid. Some cut off a Bit of this prepared Maw, and put it into the Milk: Others pickle the Maw, and dry it in the Smoke. In *Essex* they have an Herb called *Cheese-Rening*, or *Yellow-Lady's Bed-Straw*, which turns Milk like Rennet.

*The Character of a good Cheese.* He says, it shou'd be fat and heavy, the Meat of it close, and well compact, of Colour something yellowish, sweet to taste, pleasant to smell, and nothing mouldy nor mity; made of pure Cows Milk, without mixing any Sheep's Milk therewith, for it makes the Cheese less savoury, and more whitish.

*To make Cheese at* Over *in* Cambridgeshire. To twenty Gallons of Milk, they put three Spoonfuls of Rennet, and in Half an Hour it comes; but they don't put it hot from the Cow, only luke-warm, else it will be tough, and run to Coat. Then break it with a Skimming-dish, and stir it from the Bottom all one Way, for, if it is mashed together every Way, it will be lean, *i. e.* the Butter will run more into Whey. When it is settled half an Hour, take out a Plug that stops a Hole in the middle of the Tub to let out the Whey; then put the Curd into a Canvas-cloth, and roll it gently up and down between two Folks, till the Whey is drained out. When done, tie it up, and hang all on a Nail to drip dry; then put it into a deep Cheese-Vat, and lay a Board over it, and on that a four Pound Weight, to fasten it, and leave it so all Night. In the Morning this Cheese is turned out nine Inches thick, and with a long silken Thread, cut into Cheeses half an Inch thick, which are laid on smooth Boards and gently salted and turned twice

a Day

a Day for the firſt four Days, and then laid on Nettles near the Ground, and turned twice a Day for three Days, and the next Day they are laid on Boards to dry; and ſix Cheeſes, on each of them Boards, are carried to Market, where they are ſold after three Pence and four Pence a Pound. In hot Weather, eight Days, in cooler, a Fortnight finiſhes them.

*A ſecond Sort of Cheeſe*, called *Morning Milk-Cheeſe*, is made of the whole Meal of Morning Milk, and ſet hot from the Cow, and made after the ſame Manner, and will ſell for two Pence or three Pence the Pound. This Cheeſe will have a rough Coat, and will keep two or three Years, if laid moiſt in a Cellar, the other will be ſmooth.

*A third Sort*, is made after the ſame Manner, but thicker, and preſſed harder, which will keep all the Year, and is called *Morning-Milk-Cheeſe of the firſt Make*. This ſells for four Pence the Pound, and is dry and fit for Eating the latter End of *July*.

*A fourth Sort*, called *Evening-Milk-Cheeſe of the firſt Make*, is made after the ſame Manner, and ſells for a Halfpenny, or a Penny a Pound leſs. The Reaſon why Morning Milk is beſt, is thought to be from the Reſt of the Cow; is much leſs in Quantity, and is but eight or nine Hours from the laſt Milking; and it yields more Cream, and it will not ſour in hot Weather ſo ſoon as the other, by three or four Hours.

*A fifth Sort*, is two Meal-Cheeſe, *viz.* the Morning Milk is ſet till Night, and ſkimmed, and to it the Evening new Milk is put, and ſo made into a Cheeſe as before, which will ſell for two Pence, or two Pence Half-penny the Pound.

*A ſixth Sort*, is fleet Milk Cheeſe, which muſt be in a Heat accordingly, when put together, and made as the other, only preſſed very hard, and ſold

at two Pence the Pound, or under; but it is ſeldom brought to Market.

*The old Way of making* Cheſhire *Cheeſe.* When, at ſix Years old, the Cows are in their Prime, ſixty will yield ſix Quarts each every Meal; of this the beſt Cheeſe is made as follows: The Milk is ſtrained into a Cheeſe-Tub, as warm as they can from the Cow, to which are put ſix Spoonfuls of Rennet, which being ſtirred well together, and covered with a wooden Cover made fit for it, about the Beginning of *June* it ſtands three Quarters of an Hour, but in hot Weather leſs Time; then with a Diſh break it pretty ſmall, and then it muſt be ſtirred gently moving till it is all come to a Curd, when it muſt be preſſed down with the Hands and Diſh gently, leſt the Whey riſes over white; and when all the Whey is drained, and the Curd pretty hard, then it muſt be broke into a Vat very ſmall, and heaped up to the higheſt Pitch, and then preſſed down with the Hands gently at firſt, afterwards harder, till as much Whey be got out as can be that Way, and yet the Curd be at leaſt two Inches above the Vat, otherwiſe the Cheeſe will not take Preſs, that is, will be ſour, and full of Holes *or* Eyes. This done, it muſt be put into one End of a good flaxen Cloth, and covered with the *other* End; and then the Cloth muſt be tucked in with a wooden Cheeſe-Knife, that it may lie ſmooth, and yet keep the Curd quite in; then this is preſſed with a Weight of four Hundred, and left to ſtand from Morning about nine, till Afternoon about two o' Clock, and then taken out, turned into a dry Cloth, and preſſed again till ſix at Night, and then it is taken out, and ſalted all over (*elſe* it will be maggoty) and put in the Vat again to lie in it all Night; then it is taken out and ſalted again, and ſo it lies in a Tub, or on a Dreſſer, four Days, only it muſt be turned every Day: This

done,

done, it is washed in cold Water, wiped with a dry Cloth, and carried into a Cheese-loft to dry, where it must be turned and wiped every Day till sold. If the Salt is not wiped or washed off, it will give, and make the Cheese always moist. The Reason of Mouldiness, Cracks, and Rottenness, is the not well curing it, as pressing and looking after it well.

*Remarks on Cheese and Butter,* If Milk be set too hot, or be scalded in the Curd, as some call it, the Cheese will be bitter, and, the longer such is kept, the worse it will be. If it be set over cold, it will eat white, and eat harsh and dry when new; but it will improve by lying, and is best esteemed of for keeping Cheese. One of the greatest Faults in Cheese is, its Heaving, which is common where there is the richest Pasture: Some say the best Way to help this is, by pasturing Sheep with their Cows, that the best of the Grass may be quickly eaten. Another Way is to salt them in Brine, or lay them on cold Pavements, for it is reasonable to believe, it is caused by an over-great Fermentation, not only from the Heat, but also from the Briskness and Thinness of the milky Particles gained from the Luxuriancy of the Grass; therefore cool Rooms in Summer, and warm ones in Winter are most agreeable. — To stop the quick Flight of watery Particles caused by drinking cold Beer, and other thin and spirituous Liquors, that leave the Body dry, faint, and feeble; the *Dutch* eat much Butter, the *French* much Bread, and the *Spaniards* much Chocolate, which is very oily. If therefore our Mowers and other Labourers, would use hot Broth more, or butter'd Beer, or Ale, it would make them cooler, less thirsty, and enable them to do more Work. Cheese is a Food most nourishing, and, if good, the older the better; we see it and strong

ſtrong Drink ſupport the Labouring-man ſix Days in the Week. Cheeſe is valued every where.

## CHAP. VIII.

### *Of* Butter.

AS I have already obſerved, that ſome Ground will not produce good Cheeſe, I likewiſe have here ſome Reaſons to offer on Account of Butter; for where the Graſs is long, rank, ruſhy, marſhy, or in Woods, then the beſt Sort muſt not be expected: However, as Art aſſiſts Nature, ſomewhat of theſe Deficiencies may be helped by Improvements. Firſt, then, I ſhall obſerve, that the Food of Cows are natural and artificial Graſſes, Turneps, Coleworts, Green Thetches, Rye, *French* Wheat, *&c.* But the natural Graſſes are, paſt Diſpute, the beſt of all others, and of them the Upland Sort excels; and, of that, the Graſs, produced by the Manure of Aſhes, Soot, Lime, or Salt, is the ſweeteſt, for making Butter; but that, which gives the Butter a delicate deep yellow Colour and Sweetneſs, is the Lady-finger-Graſs, as I have before obſerved, Clover-Graſs, indeed, is a full Bite, and produces a great deal of Milk; inſomuch, that an Acre of this, well planted, is reckoned to feed as many Cows as two or three of Meadow; but this has its Faults, for, at beſt, it makes but a coarſe Butter and Cheeſe of a diſagreeable Taſte, and worſe if it ſtands too long before it is fed; therefore it is beſt ſown with Ray-graſs and Treſoil, which will make a better Butter, and be a ſafer Feed than Clover alone. Lucern, alſo, will cauſe Abundance of Milk; but I am obliged to ſay it is a hoving rank Graſs for Cows. *St. Foyne* and *Treſoil*, likewiſe, breed much

much Milk, but the former is not ſo proper to feed Cows in the Field, by Reaſon its ſucculent large Stalks are apt to bleed, and loſe their Sap too much, when the latter will not, and is one of the beſt artificial Graſſes for this Purpoſe, if fed young, elſe it is apt to cauſe a bitter Taſte in the Butter. In Conſideration of which bad Properties, ſome will mow theſe Graſſes daily in the Summer, and give them the Cows under Cover, to make them loſe their hoving and rank Quality in a great Degree, prevent the Cows trampling them with their Feet, and keep the Cattle from the Fatigue of Flies, and the ſcorching Heats of the Sun, as I every Summer do, for carrying on the Buſineſs of ſuckling Calves; and this we are the rather encouraged to do on another principal Account, which is to preſerve their Feet ſound; for, if the Cows ſuffer by long Drifts and ſore Feet, they will give leſs Milk, though they feed in the beſt of Paſture; therefore I have known a Gentleman be at the Charge of ſhoeing his Cows, even in the more ſofter Vale Ground.

*Neceſſary Utenſils.* Theſe being indiſpenſably neceſſary in a Dairy, it is of Conſequence to have them in the greateſt Perfection. Of all Churns, there is none ſo good as the Barrel Sort, for Diſpatch, Eaſe, and Profit; for ſome of theſe will churn forty or fifty Pounds at a Time by one Man's turning it, or ſometimes two: I have one of the Firkin Size, that churns from one to two Hundred Pounds, with Eaſe. Next to this Utenſil, is wanted the ſquare wooden Cooler, lined with Sheet-lead, and moſtly at this Time of the Year uſed for ſetting Milk inſtead of the old-faſhioned Braſs-pan, which gave the Milk a ſmall Tang. In Summer-Time the Leads are accounted better than the ſhallow round Tubs, becauſe of their great Coolneſs and ſmooth Sides, which in hot Weather raiſe much Cream, and for let-

letting the under Skim-milk out at a Cork-hole as they lie. The earthen glazed Pans are alſo ſerviceable on this Account, and will anſwer the Purpoſe where Leads can't be afforded; but, in Winter, the Tubs or Kivers excel, as being warmer, and conſequently raiſe moſt Cream. Cellars are beſt to keep Milk in, and that, under the Cover of a thatch'd Roof, is better than one of Tiles; becauſe the former is warmer in Winter, and cooler in Summer, than the latter. The great oval or round Tub is conſtantly uſed in Summer, where there be a Number of Cows kept, to receive and cool the Milk, before it is put into the leaden Kivers, and then there will ariſe the more Cream. Others will firſt put in a little cold Water in each Lead in the Summer, and warm in Winter, and the Milk from the Cows on that, which will cauſe it to yield more Cream, keep it longer ſweet, and prevent its clouting or roping. There are alſo ſeveral other Utenſils belonging to the Dairy, as a Straining-ſieve, Pails, Trenchers, Weights, and Scales, Balket, Trays, and others well known to every Dairy-maid, and ſome Sort of Shop-keepers.

*The Management of new and ſkim Milk.* In Winter they let their Milk ſtand two Meals before they ſkim. In Summer, that which they ſet at Night, they ſkim next Morning, and ſo on gradually, according to the Seaſon of the Year. If they keep above twelve Cows, they commonly churn three Times a Week in Summer; if under, twice a Week in Summer, and once in Winter. I know a Vale Farmer that keeps fourteen Cows, and yet churns but twice a Week in Summer, and that under the Diſadvantage of having no Cellar; but then he is obliged to ſkim his Milk every twelve Hours, and juſt boil the Cream a Wallop or two to preſerve it, for, without this Method, he could not keep it

two

two Days together, from a little Sowering another, after the Cows are all milked, will drip them over again, and put the Stroakings (which are little inferior to Cream) cold into the Cream-Pot, to keep the reſt ſweet and freſh. In Summer, waſh out the Leads with cold Water, and give the milky Water to the Hogs. In Winter, do it with hot Water; but never employ a hand Bruſh, or hard Sand to ſcour them with, only with a Piece of Leather, or Whiſp of Straw or Hay, rub them with Salt or ſoft Sand, or Wood-aſhes.

*To improve Cream.*—To do this, take a Pint, or more, of Stroakings, that may be got from ſix or eight Cows, and divide it into ſeveral Pans, or Leads, or Kivers; then pour into the ſame your new Milk, and it will increaſe your Quantity of Cream. About *Briſtol* in the Winter-time, they boil their earthen Pans, and dry them by the Fire, to raiſe the more Cream by their Heat. Many, after the firſt Cream is taken off, will let the Milk remain in the Leads, Pans, or Tubs, for ſix or ſeven Hours, and then ſkim off another Cream; the firſt is to make prime Butter.

*To keep Cream ſweet in the hotteſt Seaſons.*—In Summer, ſome are ſo curious, as juſt to boil the firſt Skimming of Cream, in order to make it ſerve, as a Security, to keep all the other raw Cream ſweet, that is afterwards to be added to it, ſo that, if your Churning is twice a Week, there muſt be two Boilings of the firſt Cream.

*A ſecond Way*, is to keep raw Cream in an earthen or leaden Pot, and that kept in cold Water, ſhifting it every Day into a freſh one; and this Practice may be carried on to Advantage, during the whole Summer. But, in Winter, twice Shifting in one Week will do for making good Butter.

*A third Way to keep Cream ſweet*, is to put a little Salt among the firſt, and the Cream of other Meals on that, which, with Stirring now and then to keep it from Clotting, will be a great Means to preſerve it freſh and ſweet.

*To make Butter in a cold Dairy.*—When the Cream is ready, carefully ſtrain it through a Cloth into the Barrel-Churn; and, as this Sort of Churn by a Handle and Spindle may be uſed with a more even and conſtant Motion than the beating upright Sort, be ſure to turn it gently, for then the creamy fat Part will ſeparate from the thin watery Part, and cauſe the Butter to come hard and ſtiff, whereby it will obtain a ſweeter Taſte, and keep longer; but, if it is turned too faſt, and with uneven Motions, it will make the Cream ferment too much, and be all of a greaſy bitter Nature: Again, if you ceaſe your Turning but a few Minutes, the thick and thin Parts will unite, and be apt to join, and then the Labour muſt be renewed. If Cows are ſtale milched, the Butter is difficult to come, and ſo it is in extreme cold Weather. If the Cream ſwells and hoves in the Churn into a high Froth, then it will be ſome Time before it comes; therefore, in Winter, put ſome hot Water, or hot Milk into it. Others will put a Half-Crown-piece into the Churn, or a pewter Spoon, to make the Butter come the ſooner. But the common Way in Summer-time is, to put cold Water in, and fill the Churn with it, juſt before the Cream is ſtrained into it, and in Winter as much warm Water. The firſt is to prevent Over-heating the Butter, which greatly damages it; and the latter, to take off the Chill, that otherwiſe would impede it. When the Butter is come, which you may know by its Quaſhing, turn ſomething ſlower than you did, that it may the better gather, and then, before it is enough,

it

it will be ſometimes near Half an Hour; then take it out with your Hand, knead it well, and mix beaten Salt regularly with it; this muſt be carefully regarded, elſe the Butter-milk, Whey, and Salt will ſhew themſelves in Strakes, that will ſoon corrupt and ſpoil the Butter.

*To make Butter in a hot Dairy.*— There is more than one Way to do this: In two certain Counties where I have travelled, they make almoſt all their freſh Butter, that they ſell in their Markets, in the *hot Dairy*, as they there call it. One Way take as follows, *viz.* They put their Milk as hot, and as ſoon as they can, from the Cows, into braſs or earthen Pans, and let it ſtand twelve Hours; then, with a ſteady Hand, lay Pan and Milk and all on an iron Frame, under which ſhould be burning Charcoal, or Live coals of Wood, whereof the aſhen Sort is accounted beſt; which are to heat the Milk and Cream, till it is ſcalding-hot, or that you can bear your Finger in it; then take it off, and ſet it by twelve Hours more, when you are to ſkim off a clouted Cream very clean. This, with more, is to be put into a Barrel-churn, juſt rinſed before with cold Water in Summer, and hot in Winter, elſe the Cream will ſtick. Then churn away, and, in little more than Half an Hour, the Butter will come, and be very ſweet for two or three Days, if you beat all the Butter-milk clean out of it.——— *N. B.* The hotter you put the Milk from the Cows into the Pans, the more Cream will ariſe; and, if you uſe the earthen Sort, they muſt be firſt boiled, or heated before the Fire, in order to keep the glazy Part from cracking, which otherwiſe they are apt to do, and give the Butter a diſagreeable earthy Taſte.

*A ſecond Way*, is by putting Milk in a Pan over a few Embers, and, at twelve Hours End, to ſkim off a clouted Cream with the Hand, which, by being

put into a wooden Tray, or Bowl, may, by Motions of the Hand, be preſently beat into Butter. Thus, while a Diſh of Fiſh has been dreſſing, the Butter has been made for Sauce; and thus, by heating the Milk, the greateſt Quantity of Cream is to be obtained, and the Butter-milk ſo ſweet, as to ſerve for ſeveral Uſes; but obſerve, that Coal or Turf-fires ſpoil the Sweetneſs of both Butter and Milk.

*To make Whey Butter.*— This is done by ſetting the Whey from new Milk-curds in Tubs, Leads, or Pans, as they do Milk from the Cow, and, when it has ſtood long enough, there will be a Cream over it; which churn, and make Butter with it. But ſome, to improve it, will add ſome new Milk-cream to the Whey-cream, and then it will make Butter, that ſells for about a Penny a Pound cheaper, than the better Sort. The remaining ſkimmed Whey they give to the Hogs; for Whey is ſaid to fat a Hog, when it will ſtarve a Dog; and Butter-milk to fat a Dog, and ſtarve a Hog.——— A certain Dairy-woman always uſed to boil her Whey-cream in a braſs Kettle, and put it each Time into a Pot to other Parcels, and make it into Butter twice a Week: This Method makes ſuch Butter keep almoſt a Week together, and not ſo rank, as that made with Boiling. Butter-milk, given to Store-pigs, will ſcour them, but it will not older Hogs.

*To make Butter in Winter.*—Scald the Churn, and empty the Water, then directly heat your Cream, and put it in; churn away with a pretty quick Motion to keep the Heat on; and, if the Butter comes in very ſmall Bits, as it ſometimes will, little bigger than great Pins Heads, put a Pint of hot Water into it, and churn leiſurely, and the Butter will gather, and come well.

*Another Way.*—I was told, in *Suffolk*, to make Butter after a very particular Manner, thus: Put

as

as much Cream into an upright Churn, as you think will make ſix Pounds of Butter; ſet the Churn before a Fire, and ſtir well into it ſix Spoonfuls of Rennet; let it remain in this Poſture an Hour and a Half without Stirring, turning the Sides of the Churn now and then to enjoy an equal Heat; at the End of that Time, churn away with the Mundle-ſtick, and, in about ſix Minutes, you will have a Butter; then let it ſtand a while, and it will gather; which take out, aud waſh, as uſual. But this I never tried.

*To prevent or leſſen the rank Taſte of Butter, made from Clover, Turneps, Leaves of Trees, and other ſtrong Foods.*—As Milk is the moſt homogeneal and univerſal Diet to the Body of Man, the Enjoyment of it, in its pureſt Condition, ought to be endeavoured with our utmoſt Care. In the Year 1737, I obſerved, that the Generality of the People of *Briſtol* and *Bedminſter* are ſo nice in this important Article, that they refuſe all Milk, they know is produced from the Food of Grain; and, when about *Michaelmas*-time, that the Leaves begin to fall, the Dairy-woman is obliged to manage after a different Manner, than ſhe did all the Summer before: To do which, ſhe leaves off making Butter in her cold Dairy, and then begins to make it in the hot Dairy, according to the aforeſaid Method, in order to prevent an ill Taſte in the Butter, that may ariſe from the Cows Eating Aſh, or other Leaves, that then lie on the Ground; and this Way ſhe continues all the Winter, and till they eat nothing but Meadow-graſs again, that no ill Reliſh may accrue from Fodder, or otherwiſe. How excellent, then, muſt this hot Dairy prove to thoſe, who have nothing but Clover, Lucern, and Trefoil-graſſes, and Hay; or that feed their Cows on Turneps, Coleworts, Carrots, or Grains, and Fodder, all the Year; for, by this Means, the Rankneſs of their Milk, if not wholly

wholly taken off, is much abated. However, in next Month, I ſhall give you a Copy of a large Account, publiſhed by the *Royal Society*, of a Method, communicated to them, for feeding Cows after a moſt profitable Way; whereby thoſe, who have a Conveniency for it, may make the ſweeteſt Butter at the cheapeſt Rate, and the ſmalleſt Cow to return ten Pounds a Year, and that by feeding her with no other Food, than one Sort of artificial Graſs, and the Hay made of the ſame after a peculiar Manner: Alſo how to pat Butter, and turn Salt-butter into freſh, and make it after ſeveral Ways, as they are at this Time practiſed by the niceſt Dairy-farmers in the Vale of *Aylesbury*, and other Parts.

*Why making Butter and Cheeſe is more profitable than Suckling Calves.*—This brings in Money without laying out any, furniſhing, beſides, ſkim Milk for Family Uſe, and wherewithal to feed Swine; whereas, in Suckling, there is a Charge, and Trouble of going to Market to buy Calves, and then no more Profit, than bare Suckling.

*Cambridge-Butter.*—This Butter is deemed the beſt Sort of Salt Butter ſold in *London*; and the Way of managing this and Cheeſe I ſhall give you, according to Mr. *Houghton's Dairy Houſewife*. At *Over*, where they make the beſt Butter for the Colleges, ſeven Miles from *Cambridge*, they ſell off their drieſt Cows, and buy in others, that will calve in each Winter-month; which as they are new-milched Beaſts, they produce a yellow Butter, that they ſell by only the Weight of ſixteen Ounces to the Pound. In *April*, they go in natural Graſs, and give about twelve Quarts each a Day; which Parcel, when ſkimmed, yields about a ſixth Part, or four Pints of Cream, which will make almoſt two Pounds of Butter.

They churn twice or thrice a Week, and put the Cream

Cream into a clean earthen Pot every Morning, which keeps it from ſouring, and makes it the beſt of Butter, though not ſo much.

About Sun-riſing, they put the Cream into a Barrel-churn, after they have milked their Cows; for it is a Proverb, *If the Cows be not milked by the Time the Herdſman blows his Horn, it ſpoils the Dairy-maid's Marriage*; and he blows about Sun-riſing.

In a great Dairy, they ſometimes put into a Churn, about the Bigneſs of a Barrel, twenty-two Gallons of Cream, which fills two Thirds of it. This, with the Labour of a luſty Man and Maid, comes to Butter in about an Hour's Time, more or leſs; in hot Weather it is ſooneſt, in cold Weather the longeſt; but, if the Cold be much mended by the Fire, it changes the Butter in Taſte, Colour, and Stiffneſs; but to be in a Room, a Yard and a half diſtant from the Fire, does well; but, in very cold Wheather, they put boiling Water into the Churn, till it thoroughly heats it, and, that being taken out, they put in the Cream. Theſe twenty-two Gallons, or 176 Pounds of Cream, yield about ſeventy Pounds of Butter.

Here ſome uſe the upright Sweep-churn; others uſe Barrel-churns, and reckon them beſt; and one, that keeps ſixty Cows in *Denny*, a near Town, has a Barrel-churn that holds an Hogſhead.

When the Butter is come, it is taken out and waſhed, if for preſent Uſe, otherwiſe not; and, with a little fleeting Diſh, drawn backwards and forwards in a Bowl, a little at a Time, to let out the Butter-milk; and, the cleaner that is got out, the better is the Butter: Then it is ſalted; and a Quart of Salt, which is about the fifteenth Part, will ſerve thirty Pounds of Butter; but ſome put more or leſs; and, when ſalted, it is drawn over again, with a fleeting Diſh, once or twice; then weighed into Pounds, and rolled into long Rolls; then

then put into a Baſket, and hung all Night in the Well, within a Yard, or four Feet of the Water; which will make it ſtiff.

*A new Way to preſerve Butter ſweet and ſound.* It is ſaid, that the *Over* Butter will not keep ſo long as *Suffolk* Butter; but a famous Dairy-wife, that lived there, uſed to make her Butter into Balls of thirty or forty Pounds Weight, and ſalt it a little more, than for freſh Butter; and this ſhe laid in the Middle of a Bin of Flour, and it would keep good all the Winter. Others ſalt it as uſual, and put it into Pots, and cover it about two Inches high with good Brine; but this will not keep ſo well as the other. Others make a Brine ſo ſtrong, that an Egg may ſwim in it, and therein put Pounds of freſh Butter, and it will preſerve them from Rowing beyond Salting the Butter.

The Butter-milk is drank by ſome, but the Hogs have the Main of it; and, if it ſtands long, it will turn ſour, and, in a Week's Time, from five or ſix Quarts, will ariſe a thick Skin at Top, as thick as one's Finger; and, under it, will be a very clear bluiſh Whey, and, at Bottom, a thick Curd, but not like Cheeſe-curd; it is knotty and very ſlippery. Of this Butter-milk ſome poor People make Cheeſe, but it is very tough, and muſt be eaten while green or freſh: The Whey, that comes from it, is very thin, ſour, and green, and the Hogs care but little for it.

But this ſour Whey will take off Sun-burns, cleanſe and ſmooth the Skin, and keep it from Tanning.

In *May*, *June*, and *July*, they chiefly make Cheeſe; that is, they milk the Cows half, which they uſe for Butter; the other Half, or Stroakings, they uſe for Cheeſe; and theſe Stroakings yield moſt Butter and moſt Cheeſe, and leaſt Butter-milk or Whey.

In

In an indifferent Year, a good Cow will yield, at this Time, ſixteen or eighteen Quarts a Day; and, if the Weather be dripping, ſhe will yield more, and then Butter is made longer.

Sweet and new Cream will make very pleaſant Butter for preſent Spending; but, if the Cream ſtands 'till it is four, the Butter will be very good, and keep longer, if it be not over-heated in the Churn; but, if it once turns bitter, it is good to ſpend it preſently, for it will ſoon decay.

At the Fall of the Leaf, and in cold Weather, Cream will turn from ſweet to bitter, and the Reaſon is generally ſaid to be, becauſe the Cattle eat the Leaves of Trees; but a Friend of mine will not allow it, becauſe it will be ſo in low Grounds, where there are no Trees, as well as Uplands, where there are; but what the Reaſon ſhould be is hard to know, 'till we have a good Theory of Taſte, which I find hard to be got, and greatly wanting. The beſt Way, he ſays, to prevent this Bitterneſs, is by ſetting the Milk a leſs Time, and churning it oftener; but this will produce but a ſmall Quantity, and it is beſt to ſell and ſpend it new, and not to pack it in Firkins, for it will not ſell in *London*, but the Traders are forced to ſhip it off, and ſend it elſewhere.

Some churn new Milk, which makes the beſt Butter, but will not keep. I am told, that, if ſalt Butter be well waſhed, and then beaten up with new Milk, it will taſte like freſh Butter.

The *Iriſh* rot their Butter, and, in hot Countries, they clarify it: The Taſte of either pleaſes not thoſe that do not imitate them; notwithſtanding, I have eat excellent *Iriſh* barrelled Butter.

*Whey Butter.* The Cream of Whey will not yield half ſo much Butter as the Cream of Milk will: It never is ſo hard as that, nor keeps ſo long;

but if uſed freſh, it is almoſt as good; a great deal of this is ſold in the Markets.

*Wild Curds.* From the Whey, if ſet on the Fire, will ariſe wild Curds by putting new Milk and ſour Butter-milk to it: When it is ready to boil, and when it riſes, the Curds muſt be taken off with a Fleeting-diſh or Skimmer, and then, with putting in more Milk and Butter-milk, more Curds will ariſe: Two Quarts of Milk, and as much Butter-milk, will ſerve for ſix Gallons of Whey. Good Butter-milk and the beſt Whey will fatten Hogs well.

## CHAP. IX.

### *Of* Hogs.

*Of Feeding Hogs.* The common and cheapeſt Way of bringing up Hogs of late is to drive them in this Month into the Clover-field every Morning with the Cows, and bring them Home at Night, where they ſhould have Plenty of Whey or Skim-milk, Waſh, Grains or Corn; but ſeldom give them any Breakfaſt, leſt they neglect Feeding on the Graſs: However, this great Conveniency has one Inconveniency attending it, and that is, the Clover will tincture their Fleſh with a yellow Colour, that never will be intirely altered on better Feeding. The ſame does ſome Sort of Waſh, where they are fed and fatted on nothing elſe but that and Grains; as many are, to the great Profit of the Owner, which, being not to a great Degree deprived of their Goodneſs, are mixed with very hot Waſh of Spirits, of ſo ſtrong a Nature as intirely fats the Swine, both for Pork and Bacon in a little Time. Others buy their Waſh of the Diſtillers,

lers, and by mixing Bran, Pollard, or Grains with it, fat great Numbers, others will do this with the Offal of Slaughterhouſes. But I knew a Tallow-Chandler who ſent his Greaves twenty Miles into the Country to feed his Swine with, that made ſuch a Stench, as hardly could be borne by the Neighbourhood: How wholeſome ſuch Meat muſt be, may be eaſily judged. In my Opinion, Hogs, fed with Horſe-fleſh, are far preferable. So ſome will feed with Fiſh, who live by the Northern Sea, which undoubtedly gives an oily, unſavoury, unwholeſome Quality to the Fleſh. Others, again, will give the ſweet Food of Carrots, Parſnips, Potatoes, Turneps, raw or boiled, and mixed with Pollard, Bran, Barley-meal, the Flour of *French* Wheat, Oat-meal, Grains, or Raſpings of Bread, *&c.* or alone, as with Acorns, Beech-maſte, Horſe-beans, Peaſe, Oats, or its Meal, broken Barley, or its Meal, *French* Wheat, or its Meal, Pollard wetted with warm Water. But Pollard, Starch, Whey, Skim-milk, Meals, and ſeveral other ſoft Foods, are indeed wholeſome, and make a luſcious white Fleſh, but produce a looſe Meat, which eaſily parts with its Fat in the boiling Pot, while the Bean, Pea, and other Corn make a cloſe Bacon, and ſtiff Pork. I knew a Miller, whoſe conſtant Practice was to feed his Hogs half Way with wetted Bran, and then fed them on with a fine Pollard worth fourteen Pence the ſingle Buſhel, 'till they fatted and weighed forty Stone a-piece, and though the Fleſh of them was looſer than the Corn-fed Hogs, yet, by mixing a ſufficient Quantity of Salt-petre among common Salt, it very much improved it both in Colour and Firmneſs. But the Fleſh of ſuch Hogs always weighs heavier than that fatted with Corn, and is generally whiter and ſweeter; and it is for this Reaſon, that the Vale Men ſeldom fat a Hog with their Beans, but will give it a Cou-

ple of Buſhels of fine Pollard at laſt, to take off any Rankneſs the Corn may leave.

*Breeding of Pigs.* Now you that have been ſuch good Managers, as to have a Litter of Pigs laſt Month, may cheaply wean them in this, as being the prime Month in the Year, for Whey, Skim-milk, and artificial and natural Graſſes; and if to the Whey and Milk you add Pollard, or Bran, or Grains, it will make them grow faſter; but nothing comes up to Kernel, for if a few Peaſe or Barley, or *French* Wheat, *&c.* is given them beſides, it will make them grow to a good Stature, in half the Time as Whey or Skim-milk alone will. By this early Breeding, the Pigs will thrive a-pace, and come in for their Share of Stubbling, which ſometimes, in a Shedding Year, will half fat them for Porkers; or prepare them for Baconers, by the Help of Beech or Oak-maſte, which ſometimes ſucceed the Harveſt, and near fats them, while thoſe Pigs, that were farrowed near Winter, will grow ſtunted, lean, and ſcabby, and never make good Hogs. Thus a Summer-bred Hog may very well come in for a Bacon-er, by *Candlemas* or *Lady-day* at furtheſt.

*To cure a Sow whoſe Wound gangers after Spaying.* Mix Tar, Turpentine, and Hogſlard together, and, while they are boiling-hot, pour it into the Wound. Hogs-fleſh and Horſe-fleſh you cannot ſcald, or put any Liquor too hot into their Wounds.

*Worms in Hogs, and how to keep them in Health, when they are obliged to drink putrefied Water in dry Summers.* Theſe voracious Inſects are often found in the Intrails of Hogs, occaſioned by foul Feeding, and drinking of naſty Waters, which in Ponds, in dry Summers, are generally loaded with *Animalcula*, that conſequently poiſon the Blood of the Creature, and breed theſe Devourers. An Inſtance of this happened to a Barrow-Hog, that my Butcher bought

bought out of a Farm-yard, for twelve Shillings, about five Years ago, which he kept on good Peaſe, in order to fat him; but finding it to eat ſome one Day, and none another, and got but little Fleſh, thought it beſt to kill him, and then he found a Cluſter of large-headed long Worms in a Gut, a little diſtant from the Maw; a Misfortune, he told me, was very common among Hogs; but is what mine are never troubled with, nor with the Garget or Meaſles, ſince I have given them the Powder of Crude Antimony, among their Meat, to the Quantity of as much as will lie on a Shilling, twice or thrice a Week, to each Hog, either when he goes about the Yard, or while he is fatting; and which will alſo procure him a good Stomach to his Food: Or you may give him the Powder of Madder, the ſame Quantity, four Times a Week, and it will cleanſe his Blood, keep him in Health, and cauſe him an Appetite. It is reported, that, if Hogs are foul and meaſled, four Stillers Waſh will cure them; but this I diſtruſt: However, this is true, that many of our Farmers, this Year 1741, gave the Lee of Aſhes among their Meat, as the beſt Thing they knew to prevent the Garget, Meaſles, *&c.*

## CHAP. X.

### *Of* Sheep.

*Of the Rot of Sheep.* The great Rot, in 1735, began chiefly about *Midſummer*, and continued 'till *May* following, ſo general, that many Thouſands of Sheep, in low and wet Grounds, died throughout *England*. The ſame I have to obſerve of the Summer 1738, which proved ſo wet, even from *April* to *November*, that it became almoſt as

deſtructive

deſtructive a Rot as the other, with this Difference, that the Rot, in 1735, was a lean one, and this, in 1738, a fat one, becauſe the former was ſudden and violent, as the other was leiſurely and ſlow. And though I have formerly made known a moſt famous antimoniacal Receipt to prevent the Rot, and even cure a Sheep that is but juſt touched with it, yet by Reaſon of the Difficulty there is of coming by the Regulus of Antimony, and the Dearneſs thereof, many have refuſed to try it: Since which I have been ſo happy, as to diſcover another that will infallibly anſwer the ſame Purpoſe, after much Study, Enquiry, and Travelling ſome Years.

*An infallible Receipt to prevent the Rot.* Put chopped Rue into a Pail of Water over Night, next Morning ſqueeſe it out, and put in as much Salt into the ſame Liquor as will make an Egg ſwim: Of this give five Spoonfuls to a Sheep once in nine Days in the greateſt Danger, in leſs, ſeldomer, according to Diſcretion, and let the Sheep go in the ſame Ground, be it ever ſo bad, and they will take no Harm; you may depend on it.

*Remarks on this Receipt.* There is nothing, I believe in Husbandry, that meets with leſs Credulity of its Succeſs, than a Remedy to prevent the Rot in Sheep, becauſe there have been ſo many Compoſitions preſcribed for it, that only anſwer their End in Part, or that be too chargeable, troubleſome, or difficult to come at their Ingredients. And this has the rather happened, on account of the Diffidence that is natural to a Farmer, beyond moſt other Men, who having neither Time nor Money to expend in the Trial of new Projects, and being biaſſed by old Cuſtoms, the moſt of any People under the Heavens, are perfectly ſhy of new Inventions, though they appear ever ſo reaſonable, for fear of Impoſition. Therefore the aforeſaid Receipt was calculated for their plain Apprehenſions, Cheapneſs

of

of Ingredients, and Easiness of coming by, which, if any Thing will tempt to a Trial, this must; and then they will surely find the promised Success, which may be readily proved, by singling out two or three Sheep only, that a Shepherd is seldom at a Loss to know, before they come to an absolute Rot, and then let their Case prove the Thing: Till then, let every one suspend their Judgment, and regard the following Account.

In the great Rot that happened to Sheep in 1735, there were two Farmers who rented five hundred Pounds each a Year, and kept three hundred Sheep a-piece. Now both these had a considerable Part of their Grazing-Ground lay at the Foot of a spewy Hill, adjoining to a River. Both said they knew a Remedy to prevent it in the worst of Ground, and therefore did not fear it; the Consequence was, that he, that made Use of my Receipt, saved all his Flock perfectly sound, the others all rotted and died, and so did all others about them. The Truth of which is ready to be attested, and if any think fit to enquire of both Farmers of the same, they may know where they live, on Application to me. If then the rest of *Great Britain* and *Ireland* meet with the same Benefit, I hope they will do me that Justice, in Requital, as to send me authentic Accounts of the same, by Letter Post-paid, directed for Mr. *William Ellis*, to be left at Mr. *Osborne's*, Bookseller, in *Gray's-Inn*, *London*. That I may hope for some Gratification from the Public, for openly making known so inestimable and plain a Remedy, that must be worth an hundred Pounds, even to some single Vale Farmers, who keep large Flocks, and seldom escape a Rot once in three Years; but to the Nations in general, of immense Value. Good God! tho' Man, through Inconsideration, call many of thy Works mean, yet what Food do the meanest of them yield to Multitudes of

thy

thy Creatures! Surely it was a wiſe Thought of the great and learned Lord *Bacon: Whatever God thinks worthy of Eſſence, Man ſhould think worthy of Science.*

*The Cauſe of the Red-water.* The Rot and the Red-water are certainly the two moſt univerſal and moſt fatal Diſtempers belonging to a Sheep; and therefore I ſhall offer to your Conſideration the following Reaſons, how the Red-water is firſt bred, in order to prevent it; and, if taken, ſome choice Receipts to cure it. In the Weſt of *England*, they allow it to be bred by Change of Paſture, by the Worrying of a Dog, by the Ewe's being beat down and bruiſed by a Ram, by driving too far at a Time, and by the Inclemency of the Weather. Others are of Opinion, it commences by a certain Bladder of Water under the Tip of the Heart, which ſcalds and damages it in Time, and thereby ſpoils the whole Maſs of Blood. To break this Bladder, they chace the Sheep every Morning, with the Dog, about the Fold or Pen, which makes them ſtrain; and ſo does the Fear. The Eye of a Sheep, that is near overcome with the Red-water, will appear red round the Inſide; the Belly will ſwag with Water, if tried; and the Skin look of a reddiſh Colour: Therefore, as a Sheep's Blood, at this Time, is moſtly Water, ſome are of Opinion, that Bleeding, in this Caſe, is Death. On which Account, the following Receipts were invented to ſupply it.

*The* Warwickſhire *Way of curing the Red-water.* The Cure here is, to put as much Salt in half a Pint of Spring-water, as will make it of an urinal Taſte; and, when all is diſſolved, they give it in a Horn to the Sheep, as ſoon as ever they find it begin to droop, which it commonly does a little before they die.

*A ſecond, third, and fourth Way.* Give ſuch a

Sheep

Sheep half a Pint of warm Milk from the Cow, and it will vomit the Sheep; and ſo will the ſalt Water; and therein conſiſts the Cure, as they ſay. Others will give a little Flour of Brimſtone, mixed with Urine. Others, beaten Grains of Paradiſe, mixed with Treacle.

*To cure Sheep-hove in Clover, or Lucern, &c.* In this Month is the chief Danger of the whole Year for hoving Sheep in Clover; therefore have a Remedy ready, becauſe, by an expeditious Application of ſuch, many have been ſaved. For, whether this Misfortune happens in Clover, Lucern, or by a freſh Bite of Turnep-leaves, eſpecially on their ſecond Sprouting, make Uſe of the following Medicine: In this Month, or next, gather Plaintain-leaves, and boil them in Spring-water; which ſtrain and bottle up for Uſe. When there is Occaſion, give four Spoonfuls to a Sheep, mixed at the ſame Time with a little Vinegar; and alſo juſt cut the Roof of the Mouth, rubbing a little Salt on the ſame: This is practiſed by one of our beſt Shepherds.

*A ſecond.* Open the Vein, that runs down from the Eye of the Sheep.

*A third.* But, if the Caſe is deſperate, then job a Penknife a little Way into the Paunch of the Sheep, between the Huckle-bone and the ſhort Rib, and clap a Pitch-plaiſter on the Wound; or, if you apply nothing it may do well.

*Drying Ewes.* When a Lamb is taken off an Ewe for Sale or Weaning, and you have a Mind to dry the Ewe, rub her Bag with ſome of her Milk; then mix Oil of Turpentine with ſome Tar, and anoint her Udder with it: But I ſhould have ſaid, let her firſt be milked by the Hand, at twenty-four Hours End, and then immediately uſe the Ointment, which will directly turn her Milk, and thereby prevent Damage; but, if you neglect ſome

Remedy, it is a Chance if it do not garget. This ſame Mixture I uſe myſelf, and it is ſo powerful a Remedy in this Caſe, that it will anſwer, if applied to Mares, or any other Beaſt, for the like Reaſon.

*Baiting Sheep.* Now the Graſs on Commons ſprings a-pace, and, generally, affords a good Bite; but, where a Common is not ſtinted, or the Number of Sheep limited, they are then apt to keep it always bare, and many Times obliged to go to Fold with half a Belliful, and then the Hunger, Rot, or other Misfortunes often enſue. For which Reaſon, a good Huſbandman, who has incloſed Fields near a Common, will always be provided with Clover, or other artificial Graſs, ready for ſupplying this Defect; and in this Month, after the Sheep have fed till about one or two o'Clock, will take them off the Common, and *bait* them (as we call it) on ſuch Graſs, till they be drove to the Fold; by which Means they will dung and ſtale a great Quantity, always keep half fat, and be better enabled to withſtand Diſtreſs; and for which Purpoſe I commonly ſow Clover, or Thetches.

*To make Ewes take Ram.* In my next Monthly Book, I ſhall give you an Account how to ſuckle Houſe-lambs, and ſupply the Markets all the Year with them, by three ſeveral efficacious Receipts, whoſe Ingredients will oblige the Ewes to take Ram at any Time.

*To have fat Sheep and Beef at Harveſt.* The very Beginning of this Month, ſingle out ſome of your old broken-mouthed Ewes, or Wethers, and put them into your Clover-field; or, if you have not this Conveniency, put them into your fallow Fields to fat againſt Harveſt to ſerve your Reapers. This is a good Piece of Huſbandry; for Beef, and all Meat, is generally ſold dearer then, than at other Times; and as the Men work hardeſt at that Time, they are in courſe moſt hungry, and will with Plea-

ſure

ſure eat fat Mutton, in any Shape of Dreſſing, eſpecially in Pyes, in which this Meat, well ſeaſon'd will keep ſome Time. It is likewiſe the Practice of ſome Farmers to fat a dry Cow for the ſame Purpoſe; and, if he cannot diſpenſe with the whole Beaſt, a Neighbour will gladly come in for a cheap Share. In the dear Month of *May*, 1741, when fat Beef was ſo ſcarce it could be hardly got for Money, and it ſold in *London* for Eight-pence a Pound; ſome Farmers bought Bulls, or old Cows, to fat thus againſt *Harveſt*, leſt they ſhould be obliged to get further into the Butcher's Books, than they can out. I fatted three Ewes and a large Sow againſt Harveſt, that did me great Service, in keeping off the extravagant Price of Butcher's Meat.

*Of ſheering Sheep.* The latter Part of this Month by ſome, is choſen for Waſhing and Sheering their Sheep; which is rather too early, and therefore ſeldom done, but on neceſſitous Accounts, as when fat Sheep are to be driven to *London*, or elſewhere on long Journies; for, if their heavy Coats of Wool were to remain on at this Time of Year, by long driving in ſultry Weather, it likely might bring them under Surfeits, and kill many of them. Others will ſhear their fat Sheep, while they feed in their Meadows, as believing they will thrive the faſter for it; for they can more boldly ſhear a fat Sheep than a lean one, becauſe their being fleſhy and in good Heart, makes them able to reſiſt thoſe Wets and cold Winds, that would kill poor Sheep,

## CHAP. XI.

### *Miſcellaneous Matters in Huſbandry, for the Month of* May.

HOUGHING *Beans and Peaſe.* Now hough your Horſe-beans and Field-peaſe, that were ſet and ſowed in Ridge-lands, as many are between *Harrow* and *Acton.* The Beans in Rows at about eighteen Inches aſunder, and at two Inches and a half Diſtance each Bean, were ſet by a ſmall Dibber, that is made to enter the Ground ſo far and no farther, croſs the Ridge-lands. Their Peaſe alſo they ſow in Drills, made croſs the Ridge-lands with a Hand-hough, at two or three Feet apart, which are likewiſe to be houghed in this Month. Others ſet their Horſe-beans, as above, in Broad-lands, as many are in their dry gravelly Loams between *Hempſtead* and *Watford*, on one plowing up a Wheat or Barley-ſtubble. Some, again, will ſet them in this Manner, on new broken-up Sward-ground, on one Plowing, to great Advantage; for, by this Method, the Roots of Beans and Peaſe are beſt ſhaded, and the Charge of Setting defrayed by the Seed that is ſaved. But no Way of Houghing comes up to the Horſe-break, where it can be uſed, which in this Month, is to be drawn between Rows of either the broad, or Horſe-bean, or Field-peaſe, or Kidney-bean; and then a Hand-hough immediately follows, to pull up the Mould cloſer to the Bean or Pea-roots, *&c.* than the Horſe-break could. But, where theſe Operations are not performed, I know a Farmer, that makes uſe of the common Foot-plough, who draws it between the Rows of the Union blue, or Rouncival Grey-pea, which he ſowed in Drills, at ſomething above two Feet aſunder,

der, and it turned up the Mould on the Roots of each Row pretty well, but not ſo well as the double-breaſted Foot-plough; then, as above, he made Uſe of the Hand-hough to perfect the reſt.

*Houghing with the* Dutch *Hough.* But, beſides ſupplying Houghing by one or other Sort of the Horſe-breaks, now is the Month alſo to make Uſe of the Hand *Dutch* Hough, for its great Service in diſpatching and cleaning a great deal of Ground, in a little Time, of Weeds, and keeping it fine and hollow. The Purpoſe of this Inſtrument is, to work between thoſe Rows, or Drills of Wheat, Rye, Barley, Oats, Tares, Lentils, *&c.* when any of them are ſown at ten, fourteen, or this ſide twenty Inches Diſtance; for the Horſe-break has not Room to be drawn between ſuch narrow Rows. I know a Farmer that twice a Year employs no leſs than eight of this Sort of Houghs, to his great Advantage, and ſows ſuch Wheat, Rye, Barley, Oats, Tares, Lentils, *&c.* by the Three-wheel Drill-plough, and ſows them cloſer than he does Beans or Peaſe, on purpoſe for Houghing between their Rows with theſe Hand-houghs.

*The Benefit of Houghing Beans.* The Benefit of Houghing was more apparently ſeen this Year, than in many others, becauſe the long, cold, dry Spring, and dry Summer, 1741, cauſed the Bloſſoms to dry and fall off, for Want of ſufficient Moiſture, and even killed many a Bean-ſtalk, after it had got Pods on. About *Pinner*, near *Harrow* in *Middleſex*, they were more than ordinary ſenſible of this. Thoſe Horſe-beans, that were drilled and houghed, were good Crops in general; but thoſe that were ploughed in, or harrowed in, were for the moſt Part, as bad. Here they ſowed their Horſe-beans in Drills, at two Feet aſunder, which were houghed twice in all, for four Shillings an Acre; and one Man in this Work, would hough

over

over an Acre in one Day, for which he had two Shillings; and the ſame when he houghed them a ſecond Time: However, by one Fault is known how to prevent another; and they are now reſolved to ſow all their Beans in Drills, for the future.

*Of blooming Wheat.* The Winter, 1733, was ſo mild, that Wheat grew all along very rank and long, till it ſhot into a ſmall Ear, as it always does in this Condition: The ſame, when Wheat looks whey-coloured, or yellow-flagged, as it did all *May*, and till it ſhot, and after. Then it is a true Sign it will be ſmall-eared; and this laſt Sign being occaſioned by Wets and Cold, as it happened all that *May*, and till about the fourth of *June*, it was ſo ominous of a bad Blooming-time, that the Farmers would wager before-hand, the Wheat did not bloom well; and it accordingly happened; for the Bloom came out but ſlow, and in a ſmall Quantity, and that was ſeveral Times waſhed off, which was a ſure Token the Wheat-ear would not kern well, nor did it: Whereas, the Year before, the Bloom came on the Ear, as ſoon almoſt as the Flag burſt, and was very thick on it, which brought on a plentiful Crop; for, unleſs Wheat blooms well, it cannot kern well. In 1741, there was as fine a Bloom as ever was ſeen, from the firſt to the laſt, and, accordingly, a moſt plentiful Crop enſued; which, cauſed the Market to fall ten Shillings in five Buſhels, in about one Month's Time, juſt before Harveſt.

*How a Barley-crop ſuffered by the Ignorance of a Ploughman.* A Crop of Barley was ſown in *March*, 1740-1, where a Turnep-crop had been juſt before eaten off a ſtiffiſh, moiſt, level Loam. As ſoon as the Ground was cleared of the Turneps, the Farmer laid fourteen Cart-loads of Dung on one Acre, which was ſpread, and ploughed in with the *Hertfordſhire*

*Yorkſhire* Wheel Fallow-plough; then he harrowed all plain, and ſowed and harrowed in his Barley. Now here was ſuch a Miſtake committed, as loſt half the Crop; for the Ploughman being a young Novice in the Art, ploughed the Sheep and Horſe-dung in ſo deep, that the Roots of the Barley had little or no Benefit of them, becauſe this ſtiff Ground turned up in large heavy Furrows, and eaſily buried the Dreſſing; ſo that, at the latter End of this Month, the Barley looked with ſuch a ſick, pale Countenance, as foretold there would not be above half a Crop, for want of that Aſſiſtance, which a skilful Ploughman would have given it, by ploughing in the Dung more ſhallow. Or, if he had firſt hacked the Ground, then harrowed it plain, lain on his Dung, plowed it in ſhallow in Broad-lands, and then harrowed in his Barley, it might fully have anſwered the End; becauſe the Ground, by this, would have been made fine and hollow, and the Dreſſing kept near enough the Surface, for the Roots of the Barley to ſtrike eaſily into. Or if he had ploughed it the firſt Time ſhallow into Broad-lands, then harrowed, dunged, and ploughed it a ſecond Time a little deeper, he would have turned up the Dung near the Top, and greatly improved the Crop: Though the moſt common Way is, to give ſuch Ground only one ploughing, and harrow in the Barley-ſeed; then they ſpread their ſhort rotten Dung on the Top, or fold on it, or lay twenty Buſhels of Soot over each Acre; and, if Rain ſucceeds in Time, it commonly produces ſix, ſeven, or eight Quarters of Barley on an Acre.

*A Barley-Crop loſt by Sowing Mow-burned Seed.* An old Farmer near me committed this Miſtake; rather than to buy good Seed, he made uſe of his own Mow-burned Barley-Seed, and ſowed it in *March* all over a Nine-Acre Field whoſe Soil was a loamy Chalk; but finding it, in *May* 1741, come up

up with a very weak Blade, foreſaw it would prove a defective Crop, which to cure, he firſt turned his Store-Sheep in to eat it up, and, about the Eleventh of this Month, he was plowing the ſame, to ſow it over again with better Seed.——Happy is he, who, by others Harm, learns to beware.

*A poor Barley and Wheat Crop.* By the great Froſt of 1739, the Ground was made prodigious hollow, inſomuch that one Ploughing, afterwards, did as much Good as two or three at other Times; and though a great deal of Land received the Benefit of being thus eaſily brought into a fine Tilth, yet it proved a Fault in many others; for it let in the Froſt to the ſucceeding Crops of Wheat, and, where the Ground was not well manured with hot Dreſſing, the Crop ſuffered. On the fourteenth of *July* 1741, I ſaw a Crop of Wheat and Barley grow together. The Reaſon was, that the Froſt, getting into the Ground, ſo chilled the Roots of the Wheat, that the Owner thought to prevent its Damage by harrowing Barley-Seed in over all the Ground; but there proved neither a good Crop of Wheat nor Barley, becauſe, the Earth being of the hurlucky Nature, or of a cloſe whitiſh Loam, it was too hard to let in and cover Barley-Seed enough for a Crop. Yet the very ſame Practice ſucceeded extremely well in many of the ridge half Acre Vale Lands the Spring before this, becauſe this, being a black Mould, was ſo much ſhatter'd and looſened by the great Froſt, as to let the Barley-Seed be freely harrowed in and covered; whereby an excellent Crop of Barley, with a Mixture of Wheat, was mowed off. But I remember one ſilly Gentleman loſt a great deal by obliging his Servants to tread down the Barley to come at and reap the Wheat, and then to mow the Barley, whereas, had he mowed all together, he had acted like a true Farmer.

*A Field of Wheat weeded by Sheep.* In our *Chil-*

*burn*.

*Barn* Country, a Farmer having a Three-acre Field of Wheat come up very well on the ridge Part of two-bout Stitches, and not in the Thoroughs, the Weeds grew ſo thick, that almoſt choaked the Wheat, Upon this, the Farmer turned in ſixty Sheep in this Month, even when the Wheat was upon the Spindle, and had not ſhot into Ear; the Sheep took their Paths along the Thoroughs, like ſo many diſcreet Weeders, and miſſed biting the Wheat for the Sake of the Weeds; by which they ſo cleared the Field, that he had a better Crop than his Neighbours, who before this happened, were like to out-do him.— But this was a bold Venture, and ſuch that few would run the Riſque of, did not Neceſſity prove the Incentive.

*The Benefit of dreſſing Land with Urine.*—This is allowed to be one of the beſt of Dreſſings for moſt Vegetables, if made uſe of at a right Time, and in a right Quantity. A Farmer found it ſo, when he uſed it ſo late as in this Month on his Wheat, which he ſprinkled out of a Garden Watering-pot, over his Wheat, as it grew in two-bout Stitches; and for this, and other Purpoſes, he ſaved it in a Barrel which he uſed to carry into the Field in a Cart, and there drew it out into his tin Watering-pot. But another Farmer had a better Contrivance; he kept his Chamberlie in a great Oil Jar, that is to be bought at the Oil-Shops in *London*, for about four Shillings a-piece; when it was full, he put the Piſs into a Barrel in a Cart, and, in *January*, *February*, *March*, *April*, or *May*, would let it out into a wooden long Trough, bored full of little Holes, that lay acroſs the Arſe of the Cart, by which the Piſs would run gradually out over a great deal of Wheat in a little Time; and it was obſerved, that this Farmer had the beſt Wheat in the Country on his chalky Loams, near *Tring* in *Hertfordſhire*. Another Trial was made by a Groom,

who, by Way of Curioſity, had a Mind to try the Effect of Horſe-piſs, and therefore ſprinkled it over ſome Wheat but once, that grew in two-bout Stitches near *Nettleden*, which cauſed it to come on ſo rank that they were forced to cut it down ſeveral Times, and at laſt it run ſo much into Straw, that there was hardly any Corn. Another Trial was made with Chamberlie, by a Gentleman who ſtrewed it over the Roots of a Wall-Fruit Tree to make it prolific, but inſtead of that it killed it; however, Part of the next Tree's extreme Roots having received ſome of the Piſs, it cauſed it to flouriſh in a furious Manner, and bear more Fruit than ever it did before. Another Proof of the good Effect of this was annually experienced by a Gardener, who, having but a little Spot of Ground, enjoyed the greateſt Crops of Kitchen-Greens in all the Country about him, by the Help of Piſs, which was his only Dreſſing; and which he every Year ſaved and ſprinkled over all his Land, and it cauſed his Onions in particular, to come early, and grow into very large Roots. Another Effect of Piſs was on the Roots of a Vine, which growing at the Back-Door of an Ale-houſe, the Gueſts uſed to piſs on the ſame, which produced ſuch a Multitude of large Bunches of Grapes, that the like was ſeen no where elſe in the neighbouring Parts. But, by the Way, let me give this Item in the Uſe of Piſs, that it is beſt made Uſe of when the Wheat has got a little Head, becauſe, if it ſhould burn the Roots, the Shade of its Head will help to recover them. In Graſs Grounds, it ſhould be ſprinkled in *January* and *February*.

*The great Benefit of dreſſing Ground with Dogs-Dung.* At the Sign of the *Bell* at *Dagnal* in *Bedfordſhire*, lives a Victualler, who owns about one Acre of Ground near his Houſe in a common Field, whoſe Soil being a gravelly Loam, it has been ſown

Time

Time out of Mind every Year, without making it fallow, as the reſt of the Farmers do in the ſame Field, and ſo loſe every third Year's Crop, which this Man enjoys by incloſing his Piece of Ground with moveable Hurdles, and dreſſing the ſame with Dog's-Dung, which is accounted the next beſt Dreſſing to Pigeons-Dung; and as he breaks Setting-dogs, and is a Game-keeper, he keeps ſuch a Number of theſe Animals, as return him a conſiderable Quantity of this Dung every Year, which enables him to ſow Horſe-beans, Wheat, Barley, and Peaſe alternately: And this Year, 1741, he had one of the beſt Crops of Wheat, that ſucceeded his laſt Year's Bean-Crop. And what was very particular; when moſt Bean-Crops miſſed throughout the Nation in 1740, he had a moſt plentiful one on this dry gravelly Soil, and which I was an Eye-witneſs of. And thus I know a Gentleman, who keeps a large Pack of Hounds, have the greateſt Crops of Grain, wherever he ſpreads their Dung.

*Of the new invented round Wire-Worm Sieve.*—This is a very curious Machine lately invented, and is very much to the Honour of the ingenious Artiſt, whoſe Name I forbear to mention, as having no Leave for the ſame. It is about nine Feet long, large at one End, and ſmaller at the other, worked by two Men, one of which is employed by turning it with a Winch, or Handle, like a Grind-ſtone, and, while it is turning round, it is conſtantly ſupplied with more Corn out of a Loft by a Spout, which, by Means of this Worm-faſhioned roundiſh Wire Screen, runs out in a fine clean Manner, leaving all, or moſt of the Seeds of Weeds, and light offal Kernels behind; and this it will not only perform exquiſitely fine and bright by the Twiſt of its long Worm Shape, but it will likewiſe diſpatch great Quantities in a little Time, to the more than ordinary Benefit of the Farmer; for, let his Wheat, or other Grain, be

ever ſo good, yet every Husbandman knows, that if any Burrs, Crow-Needles, Cockle, Darnel, or other Trumpery, is mixed with it, it will meet with a Price accordingly at Market: However, it is too common a Misfortune, and which a Farmer is the more liable too, as he generally changes his Servants every Year; ſo that, if he had a good one this, he may have a bad one next, who knows not how rightly to uſe a Knee-fan, or Wind-fan, to throw Corn, or to ſieve or clean it by the tall, ſtanding, ſloping Wire-ſcreen; or who, through Lazineſs, will not fan it nor throw it, or ſieve, or ſcreen it often enough. All which ill Properties are here avoided; for this Screen alone, after the Corn has paſſed through the Cavin-ſieve, and flung out of its Chaff, will ſo truly clean it, as to make it fit for the niceſt Buyer. In ſhort, here is more Labour ſaved, a great deal more done in a Day, with leſs Charge, and much cleaner, than Corn is done in the preſent common Way. The Reaſon of which is plainly demonſtrated on Sight of its Working, when the Beholder may obſerve the Corn paſſing through the ſeveral Turnings and Worm-twinings of this round Wire-ſcreen; in which, if the Seeds of Weeds, and light underline Corn, miſs dropping through in one Part or Twining, they are forced through the next, or ſome other, before they get to the Screen's End. I have only to add, that this Screen will likewiſe, by its ſeveral violent Turnings and Toſſings of Barley, exquiſitely well break off the Ails of this Corn, beyond Treading and Thraſhing it, which, according to the old Faſhion, we are forced to do, before we can clean it of its Nuſance. This, therefore, is to give Notice, that I will furniſh any Perſon with it, if, by a Letter, Poſt-paid, directed for me to be left at Mr. *Osborne*'s, Bookſeller, in *Gray's-Inn*, they will ſend me Encouragement for the ſame.

*A ſar-*

*A farther Account of Peat-Aſhes.*—To what I have before wrote (at Page 68) on Peat-Aſhes, I add, that between *Hempſtead* and *Watford* in *Hertfordſhire*, about the Year 1738, a low Meadow, that lies contiguous to the River's Side, was broke up, and a moſt excellent Peat diſcovered, not inferior (as is reported) to that of *Newbury* in *Berkſhire*, becauſe eight Buſhels of theſe, which are equal to twelve common *Wincheſter* Buſhels, are ſufficient to manure one Acre of Corn-ground with; and all that Quantity coſts but five Shillings and four Pence at eight Pence a Buſhel, and it is ſaid to do as much Service as twenty Buſhels of Soot. A cheap Dreſſing indeed, thus to return great Crops, if the Seaſon is kind, both of Corn and Graſs, beſides preventing the Damage of Inſects. But I ſhall ſay no more of it, here, by Reaſon I ſhall give a long Detail of its great Virtues and Benefits to Farmers and Gardeners, in the Month of *July*; where I ſhall inſert the Copy of a Letter, written to me by the Proprietor, ſetting forth Examples of its tranſcendent Qualities, for now the Maſk is taken off it, which for ſome Years paſt has kept the Cheapneſs and Value of Peat-aſhes in Diſguiſe, for avaricious Ends.

*To deſtroy the Potatoes as a Weed.*—Though this be a moſt uſeful Plant, yet when Wheat, or other Corn, ſucceeds a Crop of them, as is often done, they will rot the Weed, and damage much Corn, if they were not totally deſtroyed before its Sowing, which is hard to do; however, what was wanting then, may in a great Meaſure be ſupplied now, by the Weed-hook, which, if carefully employed, will kill them, for, if they are pretty high in their Haulm, they will bleed on Cutting, and die.

*Dreſſing Land with old Thatch.*—This a Farmer did with what came off an old Barn, by ſpreading it over a gravelly loamy Field, immediately after he had fallowed it in Broad-Lands, where it did a great

great deal of Good, by keeping in the Spirit of the Ground; afterwards he plowed it in on the first Stirre in Broad-lands again, and so on till he sowed the same Land with Wheat; for, though this is a tough Dressing at first, yet, by the short Nature of the Gravel, it will be soon reduced into a much shorter Body, and do considerable Service to the Wheat Crop.

*The Scarcity of Provision in* 1740.—The last Winter, 1740, and this Spring, 1741, in *Cheshire*, Hay was sold for Half-a-Guinea a hundred Weight; and as this County has not a great deal of plowed Land, Stover was so scarce, that five or six Cows have been seen to lie dead in a Farm-yard in a Morning. And Wheat, in *January*, was sold for twelve Shillings a Bushel, and Barley eight, so that the poor People, in many Places, would diligently attend a Neighbour's Brewing for the Grains to eat with Salt, which Poverty occasioned the Death of many. So in *Wales*, and *Devonshire*, &c. great Numbers of Horses, Cows, and other Cattle died for Want. The same Reason made Horses sell at a most low Rate in the North, and forced many Farmers, that never did before, to eat Barley-Bread, to sell the little Wheat they had, to pay their Rent; while some others, whose Land was of the stiff Sort, and lay sheltered from the North-Wind, got Abundance of Money. Yet Providence was so good, that on the twenty-third of *July*, 1741, Wheat, of the best old Sort, was sold in *Hempstead* Market, for four Shillings and six Pence a Bushel.

*To prepare human Ordure for dressing Land.*—For Want of knowing how to manage this hot Dressing, it has discouraged many from using it on this Account; therefore, I shall here make known a Gentleman's Method in the Improvement of it. I think it was in this Month, he had his House-of-Office emptied, and the Soil carried into a Hovel-place,

to

to remain under Cover in a Heap, which as ſoon as done, he had it all covered with Mould, where it lay ſome Time, till the Dung got dry. Then he got more Mould, and Chalk, or Lime, and had it mixed altogether with the Shovel, and let it lie ſome Time, when he had it turned and mixed again, and, by this, he got it into a dry and almoſt powdered Body, fit to ſow out of a Seed-cot; and, accordingly, he had it ſowed over his Wheat in the Month of *January*, by a Man's Hand, as we do Soot out of a Seed-cot, and it produced wonderful Crops. By this Method, the common Objection, that human Ordure, laid on Land, will breed Nettles, is proved fallacious, when it is laid on as it ought to be: Indeed, when it is put thick on Land as it comes out of the Sink, and no more done to it, I own it is apt to do it: But, when cured after this Example, it is one of the beſt of Dreſſings, both for Corn, as well as Graſs-ground. But in Caſe there is a Neceſſity for uſing this moſt fertile Dreſſing on Graſs-land, and the Owner has not Time to cure it, it may be done thus: A Farmer, in this Month, got it out of his Privy-houſe, by firſt mixing Straw with it, and then it would admit of ſhoveling and loading it into a Cart, which he drew into his Field, and laid it in Heaps; then with Three-tin Forks he ſpread it about, and let it lie till it was thoroughly dried. On this, he had a Gate buſhed, which he drawed with a Horſe, and it ſo ſcratched about the powdered Dung, as to make it enter into the Roots of the Graſs, which, by the Help of ſeveral ſucceeding Showers of Rain, produced a laid Crop in the Summer 1741. And it is this Dung, that is ſo much eſteemed by Gardeners, that many of them prefer it to all others, for nouriſhing an Onion-Crop; and which, they ſay, makes the largeſt Roots of any Dung whatſoever. So, on Graſs-ground, it produces the excellent Honey-Suckle

kle Graſs, which it will nouriſh and maintain ſeveral Years together, in plentiful Crops, as I have experienced.

*A ſecure Way to get a good Crop of Clover-ſeed.* About the very Beginning of this Month, ſhut up that Clover Field that you have been feeding, and deſign for Seed; for, by ſo doing, you may have your Clover-ſeed earlier than in the common Way, which will give you the better Opportunity to enjoy a large Seed, and get it in full ripe and dry: Whereas, if you ſtay till it is fit to mow for Hay, before you ſhut up the Field, the ſeedy Head of the Clover is generally ſo late ripe, that the Crop is often ſpoiled by Rains, or cannot be got dry, for Want of Heat enough in long Days. And indeed, this was the chief Reaſon, why ſo little Clover-ſeed could be got ſound in the Year 1739; for, when the Clover was to be mowed for Seed, a wet Seaſon continued ſo long, that moſt of it was ſprouted and ſpoiled in the Field; inſomuch that good Clover-ſeed has remained dear ever ſince; and all, becauſe they muſt needs go on in the old Way of mowing their Clover firſt for Hay, before they ſhut it up for Seed. I have convinced ſeveral of this egregious Error by Word of Mouth, but I hope I ſhall many more, by the Help of my public Pen, and, moſt of all, thoſe who are to ſave their Crop of Clover-ſeed in incloſed Fields; becauſe here they have not that Opportunity of getting it dry, ſo late in Summer as *September*, as they have who mow it in open Fields, as moſt do in the Weſt Country, from whence *London* is ſupplied with great Quantities of this Seed, which, for its great Service to the Farmer, is called *the Mother of Corn*; and therefore, without ſowing this beſt of artificial Graſs-ſeed, there is no ſuch Thing as being a compleat Farmer in the Management of an

incloſed

incloſed Farm, where its Fields are kept under the Plough.

*The two-wheel wood-chip Plough.* This Plough as I have not mentioned it before, I have thought it neceſſary to do it here, for its great Uſefulneſs in ploughing wet or dry Ground in three or four Boutlands; which it does the beſt of all others, becauſe it has but one Mortiſe in the Share; and therefore is called by ſome the *Creeper-plough*, that does not gather up Dirt, and clog behind, like our Two-wheel *Hertfordſhire* Plough; but works extreme well in all Weathers, when a Plough can be uſed, and is allowed to be the beſt for ploughing Land in three and four Bouts, which they do about *Pinnar*, *Rickmanſworth*, *Chaffont*, and ſome other few Places; for this excellent Plough is not much known at preſent, and therefore not in much Uſe; but I would recommend it, as the beſt of Ploughs for this Sort of Work, for, if a Plough may be ſaid to be ſerviceable both in Low and High-lands, this is that.

## CHAP. XII.

### *Of* Turneps; *a farther Account of them.*

IN this Month, ſome of our Farmers ſow Turneps for an early Crop; ſome ſow them to draw and ſell; others, that they may be able to fat off ſome of their Sheep betimes, and, by the ſame, prepare their Ground for ſowing Wheat, which, by ſuch early Sowing and Feeding, is often made to turn to a very good Account; but then the Management muſt be accordingly. Now, to do this effectually, ſuch Ground ought to be in great Heart to forward the Turnep-crop with Expedition, that ſuch Turneps may be eaten off by *Allhallows-tide*,

*lows-tide*, or ſooner, and the ſame Ground ſowed with that Golden Grain, Wheat: And, for this Purpoſe, it was the uſual Practice of a Farmer near *Amerſham*, to ſow in this Month the Seed of the *Dutch* white flat Turnep, that, in favourable Seaſons, would be fit to make Uſe of in *July*, *Auguſt*, or *September*. The next Sort, he ſowed, was the Green Round; then the White Round; next the Red Round; and, laſt of all, the Tankard, or Sugar-loaf Turnep-ſeed, whoſe Turnep grows with great Part of their Roots above-ground, and therefore, in *December*, *January*, *February*, or *March*, the Sheep can eaſily come at them in ſnowy Seaſons. In this Month, four Pounds of Turnep-ſeed ſhould be ſown on one Acre; becauſe the Fly, being now as buſy as at any Time, and having leſs Food, preys more furiouſly, than in the latter Seaſon; for at *Midſummer* we ſow a Pound leſs on that Quantity of Ground, and afterwards but two. If the Ground is hard, give your Harrows the Load of a large Pole; but, if fine, you cannot harrow the Seed in with too light a Harrow. A Farmer not being able to get Houghers in due Time, he, to prevent the Crop Setting, or, what we call *Burning*, drew his Harrows over them three Times in a Month, with ten Days Intermiſſion between each Time, and by this preſerved his Crop in good Order, till he got Houghers. But this is better done by the Sheim, which is a triangular Inſtrument with ſeveral fixed Iron Feet, or Houghs, in the ſame, as I ſhall deſcribe hereafter. Turneps, tho' ſown thick, never ſet ſooner than three Weeks, but, after that Time, they will heat, and force one another to grow; and then, if they are let alone, will ſet, and have little or no Roots to any Advantage. But more of this in next Month; where I ſhall very much enlarge on the Propagation of this excellent Root, by giving the following Account of it, *viz.*

*viz. Ploughing for a Crop of Turneps. A second Way. A third Way. A fourth Way. Ploughing a wet Dung Piece of Ground the best Way, for a Crop of Turneps. Turneps got on a Fallow. An Oat-ſtubble ploughed for Turneps. A Pea-ſtubble ploughed for Turneps. Another Way. To prepare a Bean-ſtubble for Turneps. Plowing and ſowing Turnep-ſeed in Vale grounds. Plowing and Sowing Turnep-ſeed in three or four Bout-lands. Sowing Turnep-ſeed in Drills. Sorts of Turneps, and their proper Soils. Of good and bad Turnep-ſeed. To prove the Goodneſs of Turnep-ſeed. Sowing Turnep-ſeeds. Houghing Turneps. The Way of ſaving a Crop of Turnep-ſeed. The Way of cleaning Turnep-ſeed. The Benefit of my Receipt for keeping off Crows, Rooks, and other Birds, from damaging the Turnep-ſeed Crop. Another Way to ſave a Crop of Turnep-ſeed. Ploughing up a Pea-ſtubble, for ſowing Turneps a third Way.* And, in *July*, I ſhall preſent the World with an excellent Receipt for preventing the Fly's damaging young ſeedling Turneps, by a Powder mixed with the Seed three Days before ſowing, for Two-pence an Acre Charge, as it is practiſed by ſome Farmers and Gardeners. And, in another Month, I ſhall inſert an invaluable Receipt to keep off the Slug and Fly from Turneps, Cole, Weld, and many other Things; and that if it rains a Month together; for it is no Powder, and which even the Gardeners about *London* are, at this Time, Strangers to.

## CHAP. XIII.

### *Of Making and Repairing* Roads.

THE preſent Turnpike Improvement of Roads, when it is honeſtly managed with good Judgment, is certainly of prodigious Service to this Na-

tion in general, by contracting great Quantities of Heath, Donny, and other common Grounds, into a narrow Compaſs; ſaving Horſe-fleſh, Time, and Labour; travelling ſecurely with Wheel-carriages; ſtopping ſtray Cattle, and, ſometimes, a Highway Collector, with many other Conveniencies; moſt of which were enjoyed to great Advantage in the ſeveral Vales of *England*, where before, in ſome Winter-Seaſons, their Roads were formerly ſo bad as even to prevent the Farmer's carrying his Corn to an advantageous Market.

*Firſt Way to mend Roads.* All Market-roads are to be kept in good Repair; and to do this in the cheapeſt and beſt Manner, there are ſeveral Ways practiſed, according as the adjacent Country can furniſh proper Materials. About a Mile from me, there were two different Roads made good, that, before, were in a very bad Condition, as being both of a loamy, clayey Nature, and lay almoſt flat; which, by ſtanding Waters, and the often Tread of Cattle, became deep and miry: Theſe Roads were undertaken to be repaired in this Month, that they might have the greateſt Length of the Summer to dry and ſettle them. To this Purpoſe, there were ſeveral Teams invited (mine for one) from adjoining Pariſhes, by way of Gift; ſome whereof came with their pecked ſhared Foot-ploughs, others with Wheel-ploughs; and began in the Middle of the Road, to plough and ridge up one Thorough, or Furrow, as they do the half-acre Vale Ridge-lands; and here one Plough came after another, till the Ground was gathered up ſix or eight Times, whereby the higheſt Part was raiſed, at leaſt, two Feet above the common Level of the Earth, for Waggons and other Carriages to travel dry in the wetteſt Times. But, as this had no other Amendment, than what the Plough gave, it did not laſt a great while in a good Condition.

*A ſecond*

*A ſecond Way.* The other Road was made thus: The Ground was ploughed in the Manner the laſt was, by being gradually gathered, or ridged up, but moſt of all in the middle Part of the Road, to a little more than the Breadth of a Waggon. On this, a Foundation of large Flint-ſtones was ſpread, all over the ſame, and Chalk over all; by which the higheſt Part was raiſed two Feet above the common Level of the Ground: And, after ſome Rains had fell, the Horſes and Waggons preſſed it ſo tight, that it became like a Rock, but apt to be ſlippery in wet Weather: This was performed at the Charge of the Lord of the Manor.

*A third Way.* Where a Road lies low, has any thing of a Fall with it, and a Water out of a Pond or River can be commanded to be run over it; ſuch a Road, when got muddy, may be preſently waſhed clean by the Run of ſuch Water; and ſo again as often as it becomes foul, as it is now done in ſeveral Parts of *England*, where ſuch a low hollow Road is kept with a ſound, hard, clean Bottom, by only ſuch timely Waterings. A clear Example of this may be ſeen a Mile or two off *Darking* in *Surrey*, where formerly was one of the worſt Roads in that Part of the County, but now one of the beſt; made ſo by the Help of an Engine, placed in a little Houſe built on Purpoſe for it, which raiſes Water out of a low Ground, and carries it over this Road.

*A fourth Way*, is done by ploughing up the Ground into a very high Ridge-Land, and then laying on a Covering of Chalk, and on that, a Coat of Gravel, which will become one of the beſt Roads, provided the Waters do not overflow it too ſoon: If they do, it will be poachy a long Time after. But, for a bye, narrow, high-ridge Road, I never ſaw a better than that gravelly one, ſituated between *Hendon* Church and *Edgware* in *Middleſex*, and

and runs about three Miles in Length, on the Back of the great *London* Road.

*A fifth Way.* In low boggy Grounds that lie very watery, where they can't be drained off, lay large Faggots of Bush, or Elm, one Layer of them croſs another, and, if Occaſion be, three, or more Feet high; and then with, or without, ſome Earth over all, cover all again with large Stones croſs each other, two Feet thick, that have one Side pretty even: Then with, or without ſome Gravel over them, a good Road may be made, as it is lately done between *Aylesbury* and *Winſlow* in *Bucks*, where their ſloughy Roads are now made very pleaſant ones. Small Faggots of Bush, or other Wood, or Broom, or Whins, or even Bundles of Bean-ſtraw, are the moſt ready Amendment, that can be made uſe of, with, or without, Gravel over them; but Stones over them are beſt, in Caſe of ſudden Damage, which often happens in Winter, by the Waſh of Rains and the Gulling of Wheels; I ſay, theſe may be made very ſerviceable, by laying them croſs a Rut, till better Materials can be had; but, if Faggots be laid long-ways, they do little Good. In ſhort, where a Road lies wide and free of the Drip of Trees, it may be kept in good Repair, with Stones, Gravel, Chalk, Water, *&c.* at a ſmall Charge: But where theſe Impediments are, the Owner, it is true, enjoys a quicker Growth than ordinary, of his Trees, but, I am ſure, it is almoſt a conſtant Damage to High-ways, where they are narrow; therefore it is a Pity there is not a Law to reſtrain their Growth ſo near High-ways. Likewiſe, where Hedges are ſuffered to ſtand twelve, fifteen, or twenty Years, for the Sake of obtaining a great deal of Wood, they do much Damage, not only by preventing the Drying of a narrow Road, but alſo by annoying Travellers, expoſing them to the Loſs of their Eyes, and cauſing Coaches, Waggons, and other

other loaded Carriages to draw the heavier. Such Owners of Hedges ſhould be obliged to trim them up, by cutting their Outſides in *May*, *June*, or *July*, with that we call in *Hertfordſhire* a *Mawhauk*, which is a Piece of an old Scythe, fixed in a long Handle of Wood, that a Man may reach their Tops with, as he ſtands on the Ground.

*To mend bye, narrow Lanes, or ſtotched Gate-ways in Vale-grounds.* Firſt, throw of the looſe Dirt, till you come to ſomewhat a harder Bottom; then lay Black-thorn Buſhes as a Foundation, and, on them, either Chalk, Hur-lucky-ſtones, Sand-ſtones, Flints, or Gravel, and it will ſecure it many Years; and it is now the Way that is made Uſe of, in the hither Part of the Vale of *Aylesbury*. And, for Gate-ways, if there is a Ditch on each Side, a hollow Tree, or four-ſquare Boards, is proper to be laid along under the Buſh and Stones, where an Arch of Brick or Stone cannot be avoided.

*How a boggy Piece of Ground was mended.* Mr. *Stoughton* ſays, that Sir *Chriſtopher Wren*, being the King's Surveyor, found the Way next the *Privy-Garden*, between the two Gates at *Whitehall*, to be extreme bad, and it had baffled his Predeceſſors, by Means of being an ill Earth: Upon this, he dug it down two Feet, and there pitched and rammed it well with Stones; upon that he threw what came out, and pitched it again ſubſtantially, and it remains firm to this Day, only muſt be mended what the Coaches wear out.——The Road out of *White-chapel* was firſt made good by laying Trees a-croſs, and then Earth, which, with Ditches made on each Side, mended it for the preſent; and, to keep it ſo, they laid a high Row of large Gravel, which is forced in, and keeps that Part higheſt to throw off the Water; and the Dirt is preſſed into the Ditches, which are every Year cleanſed, and ſo likely to endure for ever.

CHAP.

## CHAP. XIV.

### *Of* Horſes, Mares, *and* Colts.

*GRAZING Cart and Plough-horſes.* In this Month, our Draught-horſes are generally turned out to Graſs, and, in our incloſed *Chilturn* Fields, we commonly feed them on Clover, which is reckoned a foul, rank Graſs, in Compariſon of ſome of the beſt natural Sort; but, as it is of a more warm and hearty Nature, it makes the Beaſt leſs liable to take Cold, and do his Work the better: Yet, at firſt, we are careful in turning out our Horſes, by letting it be the Middle of the Day, before they go out of the Stable; and then, if the Weather is cold, or wettiſh, take them in every Night, till the Seaſon becomes more agreeable; and then, about a Week after they have been out, ſome bleed them: But, for the moſt Part, we daily work our Horſes, under the Feed of this Graſs, or Lucern, by taking them up every Morning throughout the Summer, and give them a Bait of Corn and Chaff for two Hours before they are collared; and the ſame after they come from Cart, or Plough, which faſtens their flaſhy green Meat, and cauſes it to yield good Nouriſhment. In our *Chilturn* incloſed Fields, we fetter or logger every Horſe, if we apprehend they will be unruly, and break out; but, where no Danger appears, they go looſe and free. After the ſame Manner, we turn our Horſe into a Field of green Thetches, where they will equally feed and thrive, as they do on Clover, or Lucern.

*A ſecond Way*, is done by daily mowing and giving Clover, Thetches, or Lucern, on Racks; and, though it is not commonly practiſed, yet may St. *Foyne* be mowed green, and given to Advantage, in the ſame Manner. Others ſow the three Graſſes of

of Clover, Raygraſs, and Trefoil, altogether, and cut it for Cattle's eating it green in Racks, and they will not only keep Horſes in Health, but fat them, or, at leaſt, keep them in Fleſh and in Heart under their Work, and, at the ſame Time, produce Abundance of Dung with the Help of Straw. In this Management many Farmers are not careful to bleed their working Horſes above twice a Year, and that is commonly at *Chriſtmas*, and a little after their going into, or being fed with artificial Graſs in Racks, becauſe, by their conſtant Working, the Groſſneſs of this Feed is prevented breeding Yellows, Surfeits, Farcies, Staggers, and other Ails, which often happen by too great Plenty of Blood and too little Work. This Method of mowing Clover, or Thetches, and eſpecially the latter, may be done in Vale-Ridge half-acre Lands, as well as in *Chilturn* incloſed Fields: And therefore, where convenient Ground lies near enough the Stable, that Farmer who neglects ſowing Thetches or Clover, for this Purpoſe, in my Opinion, may be juſtly called a bad Husbandman.

*A third Way*, is done moſtly in the Vale Country, where their Land lies chiefly in the common Field. There, for Want of Incloſure, they are forced to ſtake their Horſes with Baſſen Ropes, on their Graſs Baulks, which generally lie as Head-lands to their plowed Grounds. But this Way has its bad as well as good Effects; for, by this Confinement, the Horſes tread down, ſtale and dung on, and ſpoil a great deal of Graſs, which they refuſe to eat, till they are brought on the ſame a ſecond time ſome Weeks after, that the Waſh of Rains, and the Purity of the Air, may ſufficiently ſweeten, and return another good Bite. By this alſo the Horſe is expoſed to the Torment of the Bry-Fly, which moſt vehemently draws Blood, and torments the Creature, to the Hindrance of its Thriving; and

what is extreme dangerous, a Horſe, in the Night, may break looſe, and do a great deal of Damage among common Field Corn. But Neceſſity has no Law: However, there is this Conveniency belonging to it, that, by ſuch Staking, the Horſes Dung and Stale are employed and treaded in as Dreſſing for enriching the ſame Ground againſt another Crop; and this Management is not only performed on Graſs-Baulks, but alſo on Pieces of Thetches.

*A fourth Way* is performed by giving the yellow Turnep in the Manger, or letting them feed on them in the Field; but the former Way is moſtly in Uſe, as they do in ſeveral Parts of *Suffolk* and *Norfolk*, where, if they are ſown in well-dreſſed, rich, ſandy Ground in *March* or *April*, may, perhaps, be ready to pull the latter End of this Month, or Beginning of next, and may be continued, by alternate Sowings of this Seed till *Michaelmas* following, which, in their ſandy Land, becomes a pure, ſweet, and very nouriſhing Root, as being ſomewhat of the cannotty Nature, for feeding and keeping the Horſe in Fleſh and Heart, inſomuch that they will work very well under this Food, both at Cart and Plough, for it will ſupply the Place of both Oats and Hay. And it is likewiſe with this yellow Turnep, that they fat great Numbers of *Welch* and *Scotch* Runts every Year in theſe two Counties, both in the Cow-houſe and Field, and which, for its Sweetneſs, is often boiled in the Pot for Family Uſe: Therefore, whoever has a Mind to propagate this excellent Root, may be furniſhed with its Seed at the *Three Wheat-Sheaves* near *Billingſgate*, where are great Variety of moſt Seeds ſold; but I have a great deal more to ſay on this Subject, when I write of Winter-keeping of Cart and Plough-Horſes.

*Grazing Saddle-Horſes.* Some are ſo curious in the Management of Saddle-Horſes, before they are

turned

turned out to Graſs, as to bleed them a Week before-hand, and the next Day give them a Drink made of Diapenta, as follows: Put two Spoonfuls of Diapenta Powder in a Pint of ſweet Wine, or Ale, and brew them well together; or now and then give the Horſe one Ounce of this Powder among ſome Manger-meat. It takes away all infectious Sickneſs, and creates an Appetite. At the Apothecaries, they ſell it for two Pence an Ounce. A Day or two following, begin to leſſen his Cloaths by Degrees before you turn him out to Graſs, which ſhould not be till the fifteenth Day, for by ſo doing, and not carrying him, the Duſt will fill the Pores of the Skin, and prevent his catching cold. Let it be in the Middle of the Day when you turn him into the Field. And about the twentieth of *Auguſt* take the Horſe up, for then the Graſs begins to be raw and phlegmatic. Then, two or three Days after, bleed and drench him, to prevent Diſtempers which may ariſe from the Gall, Spleen, and Rankneſs of Blood; but others ſay, Never purge a Horſe juſt taken from Graſs, for that it diſſolves and looſens ſome tender Fat or Humours which will fall into the Legs or Heels, ſo that the Horſe rarely ſtands dry in the Winter after; but, after ſix Days, you may bleed him under a Quart, and at Night give him the following Anniſeed Cordial, which is a gentle Opener: ——— Boil half a Pound of Anniſeeds, in a Quart or two of Ale; pour it upon half a Pound of Honey into a Bowl, brew it till Blood-warm, and give it in a Horn, Seeds and all; then feed as uſual; give warm Water that Night, and next Morning cloath him: A Maſh will do well the ſame Night. But thick-ſkinned Horſes may be kept out all the Year, if they are allowed an open ſheltered Place to feed on Hay between Whiles, and ſometimes on Corn, that they may go out and in at pleaſure. An Example of this may be ſeen in *Great Gaddeſden* Maſh, where a conſiderable Num-

ber of fine bred Horſes are conſtantly kept; and thus the Saddle-breed may be kept to hunt and labour, much better than in a confined Place; for, indeed, a Stable is but a ſort of Priſon to this uſeful Animal, whoſe flaſhy Graſs diet is, by this Means bound in, and made to produce good Nouriſhment, his Limbs kept limber, his Hooves cool and moiſt, his Wind ſound, and the whole Horſe preſerved to a great Age. A certain Gentleman, that lives about four Miles from me, had a Saddle-Horſe with ſuch greaſy Heels, that he was declared incurable, which obliged him to keep the Beaſt all the Year out at Graſs in the open Air, only, in ſnowy Seaſons, he would give him ſome Hay, and now and then ſome Corn, which, with what Graſs he could get, enabled him to carry his Maſter whenever he wanted him, and, this for many Years, till at laſt the Horſe got intirely cured. Some, again, make it a ſtanding Rule to bleed a Horſe after he has been a Week at Graſs, by taking him into the Stable in the Morning, and, after the Vein is pinned up, to let him ſtand till the Cool of the Evening, before he is turned out, in order to prevent the Staggers, or other Diſtempers, which might otherwiſe breed from a rank Blood, and holding his Head downwards.

*The Shapes and Marks of a good Cart Horſe.* He ſhould have a thick Shoulder, and a broad Cheſt, overladen with Fleſh, hanging forward, and heavily projecting over his Knees and Feet, a ſhort Back, ſhort Joints, flat-legged, full-eyed, and wide Noſtrils, with a wide Mouth, and round Buttocks. Of ſuch, a Team ſhould be compoſed, of one Height.

*The Shapes and Marks of a good Saddle-Horſe.* He ſhould have the Eyes and Joints of an Ox, the Strength and Foot of a Mule, the Hooves and Thighs of an Aſs, the Throat and Neck of a Wolf, the Ear and Tail of a Fox, the Boldneſs of a Lion,

the

the Quick-ſightedneſs of a Serpent, and the Lightneſs and Nimbleneſs of a Hare: A high Pace, a deliberate Trot, a pleaſant Gallop, a ſwift running or rebounding Leap, and quick in Hand. Or take it thus: The Hoof ſhould be narrow and black, his Paſterns ſtraight and upright, Fetlock ſhort, Legs ſtraight and flat, Knees long, lean, and round, Ears long and ſharp, Sides and Ribs bearing out, and cloſe ſhut at the Huckle-bone, Neck long and reared, wide-jawed, Breaſt large and round, Forehead lean and large, Withers ſharp and pointed, Back ſhort, Rump round, plain, and broad, a large Space between his Buttocks, or what is called *wide-gaſcoigned*, and his Yard and Stones ſmall. In ſhort, that Saddle-Horſe, which has thin Shoulders and a flat Cheſt, with his Forefeet ſtanding boldly forwards and even, his Neck riſing ſemicircular from the Point of thoſe thin Shoulders to his Head, with the before-mentioned Marks, may juſtly be ſaid to have a light Fore-hand, and is a right uſeful Horſe for a Saddle. To which I add, that a crooked or low-backed Horſe, with thin Gaſcoigns, is, commonly, not only weak, but too often proves unhealthful either for Cart or Saddle.

*The Deſcription of a good Stallion.* Their Improvement, of late Years, has been ſo much endeavoured by the Breed of the *Turkiſh*, *Spaniſh*, *Barbary*, *German*, *Hungarian*, *Neapolitan*, *Sardinian*, *Daniſh*, *Swediſh*, and *Flanders* Sort, that a true *Engliſh* Horſe is hard to be found. For it is certain, that the *Engliſh* Mare's, Food and Climate gives a conſiderable Advantage to the foreign Blood, as well as that to her; ſo that in *Northampton*, *Leiceſter*, *Yorkſhire*, and other Northern Counties, the beſt Saddle and Cart-Horſes are now bred, as being Countries which abound in vaſt Tracts of cheap Land, and where they are moſt careful in their Breed. The *Daniſh* and large *Flanders* Horſes pro-

produce a valuable Draught Sort, and particularly the former, who is a hardy, handſome, ſhort-jointed, and very ſtrong Horſe, excelling for the Collar and Harneſs, as much as the *Turkiſh*, *Spaniſh* and *Barbary* do for the Saddle. On the Choice of a Stallion, depends a good Iſſue; of this take Care, for the Parents Diſtempers are generally hereditary. I have heard of ſome Owners ſo knaviſh, as to uſe a blind Stallion to increaſe Cuſtom; or becauſe the Horſe is a fine bred one. A Horſe is fit to cover Mares at four Years old, and will hold till he is ten, twenty, or longer, as he is in Goodneſs, and the Owner is prudent in the Management of him. A Stallion, that was allowed to cover ſix or eight Mares in a Year, has been found heartier at thirty, than another at twenty Years old, who received all the Mares that came. For it is by the Means of an old, weak Stallion, that ſo many Horſes loſe their Eyes, the common Allowance being but ſixteen Mares in a Seaſon. Their blind Colours are reputed to be a very dark Grey, the Flea-bitten, White-ſpotted, Peach-bloſſom, and Roan; Black the ſtrongeſt, and White the weakeſt Colours. A Horſe is at his full Growth at ſeven, and a Mare five Years old. A Graſs-feed is beſt for a Stallion, becauſe he will be in leſs Danger of breaking his Wind on that, than on dry Meat. Some are of Opinion, that a Stallion ſhould never be under five, nor above fourteen Years of Age. If he ſerves only ſeven or eight Mares in a Seaſon, he will work the reſt of the Year after, and laſt ſix or ſeven Years; but, if kept conſtantly Abroad with them, he will laſt but three well. To this I ſhall only add, what a chief Groom told me, whoſe Maſter keeps the *Daniſh* Breed for his Coach and Cart: The *Daniſh* Horſe, he ſays, is a black, beautiful, middle-ſized, nimble Horſe, for the Coach; requires to have a great deal of Fleſh on his Back, or elſe he will not work

work to the Purpoſe; nor will he, at any Time, bear a Whip, for, if it is much uſed on him, he will refuſe Drawing, and, at beſt, will not ſtand to his Collar in Caſe of Neceſſity, like a true bred *Engliſh* Horſe.

*To make a barren Mare take Horſe.* Stamp a good Handful of Leeks, with ſix Spoonfuls of Wine, and a little Powder of Cantharides, which ſtrain through a Cloth with Water, enough to ſerve her twice, to be put into her Nature by a Clyſter-pipe made for that Purpoſe; then, at three Days End, offer her the Horſe, and, if he covers her, waſh her Nature with cold Water twice together.

*A ſecond Way.* Take a little Quantity of Nitrum, Sparrows-dung, and Turpentine wrought together, and make like a Suppoſitory, which put into Nature, and it will do.

*A third.* Give two Quarts of Hempſeed with Oats, Night and Morning for eight Days before.

*A fourth.* Boil good Store of the Herb Agnus in her Water.

*A fifth.* In caſe you have any particular Opportunity of a fine Stallion, and your Mare is not naturally diſpoſed to receive him, or will not ſtand to be covered, then give her a Drink of clarified Honey and new Milk, mixed together, which as ſoon as done, pat her Hind-part with a Bunch of Nettles, and immediately after offer her the Horſe, whom ſhe will readily receive.

*The Management of a breeding Mare, and her Foal.* A Mare ſhould be three Years old before ſhe takes Horſe, and then ſhe will hold it to ten well, or worſe till twenty. Some will breed every Year; ſome again every ſecond; others will let two Years paſs between. The Time of taking Horſe, that the Mare may foal at Graſs, is from the latter End of *May*, to the End of *July*, for ſhe goes eleven Months and nine Days, and ſo many more as ſhe

is

is Years old above eleven Months. It is a common Maxim, that a Mare ſhould never take Horſe, while ſhe ſuckles her Foal. Some bring an ordinary Stone-Horſe firſt to one Side of the Pails, Rails, or other ſuch Place abroad, to woo and try the Mare, and, when ſhe is perceived to ſtand the Horſe, the true Stallion is brought out, and covers her twice or thrice, for which Purpoſe the Horſe ſhould not drink his Fill over Night, leſt he break his Wind; others will let her take the ſame Horſe the next Morning, and ſome the Morning following that. After Covering, lead the Mare into a Pond up to her Middle, and let her drink but little; from thence have her into the Stable, and keep her out of Hearing of the Horſe. Others, more curious, will make a Place in the Stable for the Stallion to put his Head through, and, when they bring the Mare to him, they can know if ſhe is promp. They alſo obſerve to throw a Pail of Water on her Hind-part, as ſoon as the Covering is over, to reſtringe her Parts, as we do to our Hogs and Cows. Others will directly ride her down Hill, or on plain Ground, for Half an Hour. But theſe are not quite ſo right, as thoſe who bleed her juſt before ſhe is horſed (as I ſhall by and by further obſerve) and ride her as ſoon as ſhe is pinned up. As to our Cart-breed, when they think the Mare will abide the Horſe without Kicking him, they bring the Stallion and Cover in Hand, and in a Month's Time it may be known whether ſhe ſtands her Horſing; if not, have her to Horſe again. The moſt dangerous Time for the Cart-ſort is, when the Mare is quick about *Michaelmas*, for then a ſmall Strain makes her caſt her Colt; but afterwards, with Care, there is no great Danger, which makes them work a Mare ſometimes till ſhe foals in her Harneſs; but this is carrying the Matter too far; however, they may gueſs within three or four

Days

Days of her Foaling, by the Wax at the End of her Teats; and, that ſhe may have Milk enough, ſome put her to Graſs, a Fortnight, or more, before ſhe foals. Weaning Colts are ordered variouſly; ſome Farmers wean at *Michaelmas* for their own Uſe, ſaying, Longer makes the Mare faint, and the Colt little the better; beſides which, it enables the Mare to take Horſe the ſooner next Year, and prevents her caſting her Foal: But, if the Colt is for Sale, in ſome Parts, they let them ſuck till *Martinmas*, which is the eleventh of *November*, as they do in *Warwickſhire*, for ſelling their Colts at *Rugby*-Fair, where many are ſold on this Day, though it is poſſible to wean a Colt at a Month old; but then it muſt have Milk twice a Day given it in a Bowl with ſoaked Oats beſides, till ten Weeks old, and then they commonly give it Whey twice a Day, or oftener, at Graſs. The firſt Winter they muſt be maintained with Hay and Oats twice a Day. The next Winter they will live on Straw, like a Horſe; but they ſhould never be backed till three Years old, nor drawn till two; though a Colt is more tender at three than two, becauſe it then ſheds its Grinders. Others won't wean a Colt till *February* following, and then take them out of Hearing of their Dams. Colts are not cut till about a Year old, but ſome let them alone till two, three, four, or five. In the North, they ſometimes ſpay a Mare at a Month old, and then they become larger and tougher than a Gelding; but their ſpeedy Growth is apt to make them over-run in the Joints, and be weaker in them Parts, than if they were never ſpayed. Some are ſo curious in the Management of their Colts, that they always give them two Purges, and a Cordial-Drink, upon their taking them into the Stable for good, to kill Worms, and prepare their Bodies the better for Houſe-feeding. The firſt Foals are commonly ſmall and puny. A full aged Mare breeds the ſtrongeſt Colts; and an old

Stallion may get as ſtout Colts, as a younger Horſe. In this Month, get your Cart-mares leaped.

*A further Account of the breeding Mare.* The *Engliſh* Mare is allowed the beſt of any to breed by, and, by ſome, thought fitter at four, than three Years old; for that, after ten, ſhe declines. Before Covering, let her be well fed in the Stable for ſix Weeks, and, if you would have her take ſure, bleed her five Days before ſhe takes Horſe; then tie her to a Poſt abroad, and bring her out a Jade Stone-horſe to dally and provoke her; after which in a Morning faſting, let the true Stallion cover her: Then throw a Pail of Water on her Hind-part, and take her out of hearing of the Horſe, but not to eat nor drink for five Hours after; then give her a Maſh, and, after that, Water with Bran in it; for, in this Caſe, it is neceſſary to feed her as ſparingly, after ſhe has taken Horſe, as you did plentifully before. Her Signs of Standing are, a good Stomach, not neighing after a Horſe, piſſes not often, opens and ſhuts not her Shape frequently, nor her Shape grow gaunt after it, nor her Hair ſleek. Others will put a Mare and a Horſe together three or four Nights, and take him away every Morning to feed him well all Day, but the Mare ſparingly. Then keep the Mare in the Houſe a Month, before ſhe is turned out to Graſs, and taken up at *Michaelmas*. If ſhe cannot foal, give her the Quantity of a Walnut of Madder-root Powder, diſſolved in a Pint of warm Ale; it is ground, and ſold by the Druggoſt; and, if ſhe does not void her Secundine, put a Handful of Fennel-ſeeds into a Pint of Strong-Beer, and boil them with a fourth Part of Sweet-oil; pour this into her Noſtrils lukewarm, and ſtop them for ſome Time. When ſhe has foaled, milk her before the Colt ſucks; and, if her Bag is hard, boil ſome Lavender and Spike-leaves in her Milk, and with it chafe the Part warm. Hot Water muſt be mixed with

a little

a little Bran, and Maſhes given her. At a Month's End give her a Maſh with Flour of Brimſtone and Savin in it; it will do the Colt Good; then work her, but do not let the Colt ſuck when ſhe is hot. Some ſay, Winter Foaling is bad, becauſe there is no Graſs: Others, that it is beſt; becauſe, if the Mare is kept in a warm Stable, and well, the Milk is better, and will make a larger and tamer Colt. To prove if a Mare is with Foal, pour a Spoonful of cold Water, or Vinegar, into her Ear, and, if ſhe only ſhakes her Head, it is a Sign ſhe is with Foal; but, if ſhe ſhakes Body and all, it is a Sign ſhe is not. If ſhe is ſubject to loſe the Foal, give her a Maſh of Malt now and then; if ſhe has loſt it, boil Mugwort in a Quart of Brine, and give the Liquor. Always ſet down the Day of Horſing, that you may the better watch her Foaling, and be the readier to aſſiſt with Medicine and Hand, if Occaſion require. Then, to make her foal, give her ſome Polypody in a Pint of warm Ale. When foaled, give her a Maſh, three Days together, of three Pints of Meal in warm Water, into which put a Handful of Salt; and then, if the Weather is ſeaſonable, ſhe and her Colt may go to graſs. Some, indiſcreetly, work a Mare in a Week's Time after foaling; but if you will have the Mare and Colt improve, let it be a Month firſt. After the Colt has ſucked a whole Winter, its Mouth will grow hard; then put it into a Stable, without tying, well littered, and fed with Oats, Bran, and good Hay; but harder Meat than this it ſhould not eat, leſt it ſtrain its Eye-ſtrings and blind it. This Way of Weaning makes ſtronger Horſes by far, than thoſe weaned at Graſs. A Horſe is not fit for much Fatigue, till after he has cut his Tuſhes. I ſhall conclude this Article with the following Hints: That whereas it is too common a Fault with the *Engliſh*, to break their Colts too

young, before their Joints and Sinews are well knit, their Hoves tough, their Eye-ſight good, and their Chine full ſtrong, which often is the Occaſion of Blindneſs, brittle-hoofed, weak-backed, ſhackle-hammed, full of Windgalls and Splints; and thus a Horſe becomes old and ſtiff at ten Years of Age. On the contrary, if he is broke late, at three or four Years old, he will laſt a good Horſe till Twenty-five. This is a Misfortune, they ſay, is generally ſeen in the *Spaniſh* Breed, whoſe Country, being open, obliges them to take up their Horſes too young; which, with us, may be prevented by our incloſed Grounds, and, by a right Management, have the beſt of Horſes, that none breed, but ourſelves; becauſe, in other Climates, they degenerate, and, which will always occaſion a good Market for ours, in foreign Parts.

*The particular Management of a certain Gentleman in the Breed of Race-Horſes.* This Gentleman keeps a conſiderable Number of the Race-breed, and endeavours, all he can, to make his Mares bring the right Sort; and, to cauſe them to ſtand to their Horſing, he always bleeds, and throws Water on the Mare, as ſoon as horſed: But, when his Groom has the ſole Management of the Affair, he ſtrikes the Mare firſt with his Flegme without a Cord, and lets her be directly horſed; then he cords, till ſhe has bled enough; for, if he ſtruck her after Horſing, it might fright her, and ſpoil the Intention, as it happened to the ſame Gentleman in another Way; and that was, when he had ſeveral Mares horſed in one Day, he put all of them together in one cloſe warm Stable, which prevented moſt of their Standing to their Horſing; for here they dallied and provoked one another, almoſt as if a Stallion had been among them. But, ſince that, he has learned better, and puts each Mare in a Stable by herſelf till the Evening, and then turns them out in dif-

different Fields; which cools her Body, and keeps them quiet; which is better than Turning her out in the Day-time, for then ſhe might ſee, and be more liable to hear others. It was this ſame Gentleman, that had got a Receipt to make a Drink, that would cauſe a Mare to take Horſe, and, by other Directions, to ſtand to it: But, after ſeveral Trials, it was proved not to anſwer, and then it was laid aſide. Now, in order to have ſtronger Colts than his Neighbours, he lets ſome of his Mares be horſed in *December*, *January*, *February*, or *March*, that, by ſuch forward Horſing, the Colts may be the better enabled to run a Match with Colts of the ſame Number of Years; by which there may a conſiderable Advantage accrue to the Owner: For, although the Years of their Age may be reckoned alike, yet there may be half a Year's Difference by the forward Horſing; beſides which, as ſuch forward Colts are kept in the Stable, on Milk, produced from Hay, Corn, and Maſhes, ſuch Management muſt ſtill add to the Strength of the Beaſt, by the more nouriſhing Nature of ſuch Milk, than that produced by Graſs.

*To preſerve Colts when the Mare dies in Foaling.* This often happens, and then, without good Management, the Colt dies alſo; therefore one, over nice, uſed to prepare Cows Milk, ſugaring it, and heating it over the Fire; but this did not anſwer, till the following Method was made uſe of, *viz.* By milking a Cow into a Bowl, and then putting a Finger immediately into the Colt's Mouth, and forcing its Chops into the Milk, it would ſuck it; and go on, till it would drink the Milk of itſelf, and be nouriſhed wholly by it, till it would eat Hay, and Corn. It is ſaid, the *Arabs* generally let their Fleet-breed Colts ſuck Camels, becauſe theſe Creatures, being of a greater Buſk than Mares, give the greater Quantity of Milk, which, in Courſe, brings

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on a ſpeedier and ſtronger Growth; for, whether Camel's, or Mare's Milk, is all one to the Colt.

*The Cauſe of Blindneſs in Horſes.* There are ſeveral Incidents, that may occaſion this Misfortune: Firſt, hereditary, by Means of a blind Sire. Secondly, by the Stallion's Leaping too many Mares in one Day; for it is ſuch an one, that not only gets weak-ey'd Colts, that ſoon become blind, but alſo unhealthy Jades. In *Shropſhire*, one Stallion leaped fourteen Mares in one Day, as I was credibly informed by a Nobleman's Pad-groom, and only the laſt proved with Foal. One of this Sort fell to my Share at *Dunſtable* Fair, 1739, where I bought, I thought, a very promiſing Mare three Years old, and had a good Account of the Sire and Dam, ſhe came of; for ſhe was bred but at a Village near *Leighton-Buzzard*, and had the Marks of a good Creature. But I was deceived; for her Eyes begun to fail at four, and ſhe proved not only a Jade in the Collar, but a moſt ſtubborn, unlucky Bitch beſides. If the Boy ſtruck her at Plough, ſhe would anſwer it every Time, and give a vehement Strike out, inſomuch that I was forced to have Trace-ropes made on Purpoſe to hook to the Collar, that the Boy need not go near her Hind-legs; and, in the Team, if ſhe was much whipped, ſhe would ſit on her Arſe, and defy any ſuch Remedy. In ſhort, after keeping her about a Year, I luckily got a Swap at the ſame Fair; and thus as ſhe came, ſhe went: However, I afterwards told the Buyer of her Kicking, to which he ſlightly anſwered, He muſt take the more Care of her. *Thirdly*, By feeding indiſcreetly Colts too ſoon with hard Corn. *Fourthly*, By working them too ſoon and too hard; which is a Fault, we Farmers are too commonly guilty of; for to work Colts at two Years old, againſt aged ſtanch Horſes, is certainly the Cauſe that many fall blind, and become weak-backed, and ſhackle-hammed

*Fifth-*

*Fifthly*, By a Horſe's holding down his Head for a conſiderable Time together, which ſometimes brings a creamy Humour into one, or both Eyes. I had a Horſe, that always ſuffered at Graſs this Way, till he loſt one Eye intirely. *Sixthly*, By frequent and violent Purgings, that not only endanger his Eyes, but his Life too. *Seventhly*, By taking a Horſe off a plentiful Living to Scarcity, and then it is that his Eyes ſink. So a Horſe when he is hard rid on poor Feed, is apt to ſuffer by the Conſumption of his Eyes, for Want of a due Nouriſhment from his Blood.

*Warranting a Horſe.* By Cuſtom a Jockey is to warrant a Horſe when ſold, againſt Glanders, or other Unſoundneſs, hot or cold; but not againſt thoſe Infirmities that may be ſeen: In which Caſe, the Buyer is to re-deliver the Horſe in nine Days Time, and have his Money again, or elſe the Law will oblige him to it, as was by a particular Caſe, a few Years ago, proved at *Hertford* Aſſizes; where the Buyer recovered his principal Money, with Damage and Coſts, for the Sale of a founder'd Gelding, warranted ſound.

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## CHAP. XV.

### *Of* Trees *and* Inſects.

*To improve the Cherry-tree.* If, in the laſt Month you have not drawn the Point of the Knife down the outward Rind of ſtandard Cherry-trees, neglect it no longer than the very Beginning of this; and then it muſt be done as ſhallow as poſſible, that only the very outward Bark may receive the Cut, leſt, otherwiſe, the Sap and Gum be diſcharged by the Slit in too free a Manner; for, if this Operation is not done, this Hoop-bark will certainly

tainly impede the Growth of the Tree's Bulk. Mr. *Laurence* ſays, that, by this very Means, a Cherry-tree will grow bigger in one Year, than, if neglected, in fifteen: I have Hundreds of young Trees, that I every Year cut the Bark off.

*Several Remedies for the Blights of Trees.* Now look to your Standard Fruit-trees, this being commonly the moſt dangerous Time for the firſt Breed of Inſects on them, who do a great deal of Miſchief, eſpecially in dry Seaſons; for, when this happens, as it did in the Year 1736, a great deal of Fruit is generally deſtroyed. In this Caſe, therefore, uſe theſe Remedies: Burn Horſe-litter, or other Straw, under your Trees; or elſe, with a *Dutch* Squirt, throw a good Quantity of Water on them; or carry up ſome Pails of Water, and throw over their Tops, and it will ſecure your delicate *May* Duke Cherries in particular; which as they ſeldom grow on a very large Tree, it is the eaſier done. All this I have known to ſucceed to Admiration; for, about the latter End of this Month, an Inſect ſeldom, or never, miſſes attacking our green Cherries with ſo much Diligence and Fury, as to ſpoil great Numbers of them, by eating into their very Stone; and, becauſe of this hollow Operation, we call them *Ladlemen*, or the Green Fly, or Bug. The latter End of this Month, there were alſo in this dry Seaſon, vaſt Swarms of exceeding ſmall Inſects, thought to be brought over by Eaſterly Winds, that ſettled on our Apple and Pear-trees, and there made their Cobweb Neſts. The Butterflies alſo laid their Eggs, and bred Caterpillars, that over-ran many Trees, eſpecially thoſe that ſtood in low Grounds, out of the Power of Winds, and eat up both Fruit and Leaves. So likewiſe did theſe Devourers ſeize on the Beech-trees, where they ſtood ſo thick, as to hinder the Benefit of Winds, and thereby became ſo plenty, and ſpinned ſo many Cobwebs, as made

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it diſagreeable to walk near ſuch Trees. If your Trees grow in Hedges, and you cannot well burn your Straw under them, lay ſuch Rubbiſh-ſtraw at a proper Diſtance from the ſame, and ſet it on Fire, when a ſtrong Wind blows; for, by this, the Smoke will be carried among the Caterpillars, or other Inſects, and kill them.

*Cleaning Trees.* Now make Uſe of the Knife and Hair-cloth; the firſt, when the Body and Arms of your Standard Fruit-trees are wet, ſhould be ſcraped with the Back of a Knife, to rub off the Moſs, and dilate the Bark, for the more free Admiſſion of the nitrous Air and Rains into the ſame. The ſecond will anſwer the like Purpoſe, and both will add a new Fertility to the whole Tree, and conſequently be a Means of increaſing its Fruit.

*The Breed and Miſchief of the Slug, or naked Snail.* This Inſect, as far as I can underſtand, has eſcaped the Notice of all Authors; and therefore I ſhall, here be the more particular in my Account of it. There are two Sorts of Slugs, or rather two Colours of them (occaſioned, perhaps, by their Youth and Age) for they both agree in Bigneſs, Shape, and in their Miſchief for about nine Months in the Year; are white and black, an Inch or more long, but have no Shell. The Slug is bred, both in Field and Garden, by ſmall Eggs, that they commonly lay in *Auguſt* in the Ground; and here, in many Places, they lie undiſturb'd till *Candlemas*, when they crawl out of their Neſts, and begin to feed on the ſprouting Vegetables till *November*, if *October* is a mild Month. Some think the old ones die every Year; others, more probably, that they wrap themſelves up in dead Leaves, Graſs, or other Stuff, for their Preſervation in cold Seaſons: Yet, when Winters have been attended with long and violent Froſts, as that was in 1739, it kills moſt of theſe Inſects, as I am ſure that did; for we have had none

to ſignify in the two following Summers. In ſome wet, hot Summers they do a Power of Miſchief. My Neighbour ſowed Peaſe in *February* in the Field, and, by the firſt of *April*, they were eaten up. In *April* 1738, the Slugs were ſo thick among the random-ſowed Peaſe, that Pottles of theſe Inſects might be gathered in a little Field. The firſt green ſweet Sprout of ſome Peaſe were eaten, before they could be well ſeen; when this happens the Crop is ſpoiled. Or, if they let it alone till the Stalks get up, and eat them down afterwards, it is of bad Conſequence; becauſe if the Pea happens to make a ſecond Shoot, as ſometimes it does, and grow the thicker for it; yet then there is commonly a great deal of Straw, and but little Corn, by Reaſon of their late Kerning. In *September* they will lie and eat Holes in the Turneps, and get two or three together into a Hole. A Neighbour of mine gave one Plowing to a Wheat-ſtubble, and harrowed in Rape and Turnep-ſeed together, for the Sheep to feed on their Leaves; but the Slug preſently eat up all, while they were in their two ſeedling Leaves. They will feed on young Carrots and Turneps to that Degree, that many Thouſand Acres of the latter have been deſtroyed in one Year, and that after the Land has been ſowed two or three Times in one Summer. It is theſe Inſects that help to bring on the Rot in Sheep, by their ſlimy, watery Bodies, which the Sheep take up in their feeding on Commons, and elſewhere. In ſhort, the Slug not only hurts young Carrots, Peaſe, Turneps, Clover, Rape, Flax, *&c.* while they are in their ſweet ſecond Leaf, but continue their Miſchief to the Pea in particular, ſo long that it is *Holy Thurſday* very often, before the Farmer can tell how it will be with them. They will eat Thetches, or Tares, ragged, but not ſo eaſily kill them as the Pea. The Bean they never hurt, becauſe it is tough and bitteriſh. It is in warm

ſhowery

ſhowery Weather, that they do the moſt Damage; for in a dry Time they diſappear, and, by that, the Plough, and the Harrows, many of them are killed. In the Day, they lie in little Holes under a young Turnep, which ſerve as Paſſages to their Cells; and, in the Night, Thief-like, they do their Miſchief. If the Summer is for the moſt Part dry, they do but little Harm till *September*. This Inſect is likewiſe the Peſt of the Garden, as well as the Field, where he devours young Cabbage-plants, Kidney-beans, and many other culinary Vegetables, to the almoſt Ruin of the laborious Gardener, who knows no better Way to deſtroy them than with his Fingers, or Sciſſars, whereby he loſes a great deal of Time and Pains. Therefore, I ſhall, in one of my Monthly Books, diſcover a noble Ingredient, that, as I have hinted before, will infallibly prevent the Slug's doing any Miſchief to Vegetables, it is ſowed upon, and that in the wetteſt Weather; for it is no Powder, but will dreſs the Land at the ſame Time: So that neither the Gardener, nor Farmer, need fear loſing their Crops of Turneps, Cabbages, or any other, by the Slug, as heretofore.

*The Nature and Miſchief of the Fly.* As the Slug does his Miſchief in the Night, this Ravager does his in the Day, and ſo furiouſly attacks young Turneps in their ſweet ſeedling Leaves, that, in ſome Years, it is a Rarity to ſee an Acre of well planted Turneps. In *April* they have been ſeen to fly in Swarms, juſt above-ground, a little before a Shower of Rain, ſkipping and flying from one Turnep to another, till they deſtroy a whole Field in a ſhort Time. Its black Body is a ſmall Matter bigger than a large Flea, and, at Night, lies on the Ground, under a Turnep-leaf. This Inſect, with the Slug and Caterpillar, are all concerned in the Ruin of the Turnep; but the Fly is reckoned by far the archeſt

Enemy, becauſe, in almoſt all Weathers in the Summer-time, he commits his Rapine, by gnawing the young Turnep, while it is in its ſecond, luſcious, tender Leaf; for, when it has made its third, he then often refuſes it, as being too tough and bitter. It is theſe Inſects, that bring the Farmer under very heavy Loſſes of Time, Labour, and Money, by ſpoiling his Crops; which, to prevent, there have been ſeveral Antidotes invented: As Soot, Lime, Aſhes, Tobacco-Sand, and, in particular, the Horſe-hair Rope, and Glaſs in Powder to keep off the Slug: But, as all theſe have been found either ineffectual, or too chargeable, I ſhall in my next Month give you a Receipt that will ſecure an Acre of Turneps from the Fly (but not the Slug) for Two-pence Charge; for I do it by applying ſomething to the Seed for three Days together before Sowing, and is what I every Year practiſe, to the Saving of my Turnep-crops. Now, if theſe two Secrets anſwer what I hear aſſert they will do, and which I am certain they will, by full Experience; how valuable they will be to the Farmer in particular, and to the Nation in general, I leave to the Thought of my Readers.

*F I N I S.*

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THE

# THE MODERN HUSBANDMAN, FOR THE Month of *JUNE*.

## CHAP. I.

### *Of new invented Ploughs, Horſe-Breaks, Houghs, &c.*

ACCORDING to my Promiſe in laſt Month, I here preſent you with the Deſcription of two excellent Drill-ploughs, now in actual Uſe, with ſeveral Tenants and others, as the beſt and cheapeſt of Inſtruments, for increaſing Crops of Corn, *&c.* at the leaſt Charge.

*The three-wheel Drill-plough.* This Sort is a new, well invented, and moſt profitable Machine, or Plough, for making Drills or Furrows, with its light Share, two broad Boards, and its two commodious fixed Handles; for ſowing Horſe and Kidney-beans, all Sorts of Peaſe, Wheat, Barley, Thetches, Tills, Turneps, and artificial Graſs-ſeeds,

in a far better Manner than that performed by the two common Methods uſed in *Hertfordſhire* and many other Places, where they ſtrain or ſprain their Corn in Furrows, made in Broad-lands and four-thorough Stitches, or two-bout Lands, out of the Hand, in a very uncertain irregular Way, eſpecially when it is done by an indifferent Sower, which cauſes many Grains, or Seeds, to be buried, ſo as never to grow; and alſo gives the undiſturbed Ground a large Opportunity of breeding numberleſs Weeds, and increaſing their luxuriant Growth, to the Crippling of Crops of Corn, impoveriſhing the Tenant, prejudicing the Landlord, and contributing to the Scarceneſs and Dearneſs of the Staff of Life in particular. For, as the Hand can never ſtrain, or ſow, the Seeds of Corn, or Graſs, in an equal Diſtribution of them, and in an exact Depth and Breadth of Earth, this excellent Plough ſupplies theſe random Ways, and ſows or drops the Seed in true Diſtances, and in a level Depth out of a Hopper in Drills, by the Help of a two-wheel-Fore-carriage, and that of a third Wheel fixed towards the hinder Part of the Plough, near a Foot from the Beam, which, by turning on a Spindle-iron in the ſame Pace the Fore-wheels move, cauſes the Rotation of a roundiſh Piece of Wood, in Form of a Cylinder, about three or four Inches in Length, cut into Bollows, ſomewhat like the Wheel of an over-ſhot Water-mill: This, as the Axis of the third Wheel goes round, turns with it, and thereby lets the Seed fall regularly out of a Hopper into the Drill; and, when all is ſown, the whole may be covered by Harrow or Hand-houghs, or, cheaper, and better, by two fixed Sticks, or Pieces of Wood, faſtened behind, according to the Way I am going to write of in the Uſe of the next Drill-plough, moſt of whoſe good Properties this has, and, in ſome Reſpects, excels it, for Performing, in Chalks, Gravels,

Gravels, dry Loams, and other hard Soils. Nor, will this moſt ſerviceable Plough loſe any of its Seed at the Land's-end, as ſome may imagine; becauſe, by the Ploughman's holding it a little up by its fixed Handles, the third Wheel ceaſes moving, and the Seed is kept in, till it moves or works again.

*The Pulley Drill-Plough.* This is likewiſe a good Sort of Plough, invented and ingeniouſly contrived without the large Wheel-carriage, and therefore, fitter to be uſed in low or Vale-grounds, for ſowing Corn or Graſs-ſeed out of a Hopper, by Means of an Iron Cog-wheel of about ten Inches Diameter, in the Nature of that fixed in ſome Foot-ploughs, and placed towards the Middle or Center of the Plough, to keep the Iron Share to an exact Depth; and, as this Wheel turns, it turns ſmaller ones and Pullies, that occaſion the Seed to drop regularly out. The Account belonging to this Plough take as follows, as it is publiſhed in a Print by the Inventor, *viz.*

*Firſt.* Half or more of the Grain is ſaved by being ſown at one certain Diſtance, equally covered below the Injury of Froſt, and Heat, and Rapine of Birds.

*Secondly.* The Corn may be ſown in the Middle, or convenient Depth of Mould.

*Thirdly.* The Corn ſown in Ranges (the Intervals being two Feet or more) gives Room for Houghing, or Weeding, and Earthing up.

*Fourthly.* If the Staple or Mould is ſhallow, by this Plough and Harrow may be collected a proper Quantity of it for the greateſt Nouriſhment of the Grain.

*Fifthly.* Plowing the Intervals after the Corn is ſown, gives the Advantage of a Summer-fallow.

*Sixthly.* Before Winter, in the Middle of each Interval, may be raiſed a Ridge, to protect the

Corn from cold Winds, and prevent the Snow's being driven away by them. The Furrows or Trenches, from whence the Earth of theſe Ridges is taken, drain the Water from the Corn, ſo that it will lie drier and warmer than in the common Method of Sowing.

*Seventhly.* If Turneps are drilled, Corn may be drilled in the Intervals in Spring, which prevents a Crop being loſt by late Feeding, or Taking off the Turneps.

*Eighthly.* The Air and Rays of the Sun, having a free Paſſage along the Intervals, will ſtrengthen the loweſt Knots of the Corn, by which Means it is not ſo likely to fall as in the common Huſbandry, which excludes the Benefit.

*Ninthly.* Taking off the Harrow and the lower Wheel (the Axis of which on one Side turns under a Plate ſcrewed on) and diverſifying the Share. This Plough may be uſed for any Sort of Houghing between the Drills.

*Tenthly.* The Cog-wheel, moving on a clear Furrow, is not liable to the common Obſtructions.

*Farther Advantages belonging to the three-wheel and pulley Drill-Ploughs.* Theſe two Ploughs, with their Appendages, I recommend to be ſo uſeful, that, in my humble Opinion, none ought to be without one or both, where their Situation and Soil will admit of their Uſe, becauſe of the many Advantages attending the Drill Huſbandry. If you have no Common for Sheep, or if you live remote from Towns, and cannot conveniently get Dreſſing or Manure for your Land; or, that it is too dear for your Purpoſe; or, if you are poor and unable to purchaſe it; theſe Ploughs will ſupply the Deficiency in a great Meaſure. By the Uſe of theſe Ploughs, Horſe-breaks, and Hand-houghs, the extreme Loſs of Labour, Time, and Money may be here ſaved,

by

by their preventing and deſtroying Weeds among Corn, Hops, Turneps, and artificial Graſſes. The great Damage of loſing the third Year's Crop, by fallowing and plowing the Ground, for Turneps, or Wheat, is thus likewiſe hindered, by the fine Tilth theſe Inſtruments conſtantly keep the Land in; ſo that one or two Crops may be had every Year ſucceſſively off it, without impoveriſhing the Ground, if it is rightly managed, by alternate Sowings of Corn, Turneps, and artificial Graſſes. Drill-corn is ſooner ripe, and eaſier reaped, or mowed, than that ſown in Broad and Ridge-lands. By Drilling and Houghing, the Slug and Fly, the Caterpillar and Canker-worm, are better kept off from ſpoiling young Turneps, Peaſe, Flax, Rapes, *French* Wheat, Weld, Clover, and other Vegetables, which, in the common Way of Sowing, they are very much ſubject to. But I am ſenſible, that to theſe Lines there will ariſe ſome Objections, as, that theſe Inſtruments are too chargeable, or that their Uſes are too difficult to underſtand. To which I anſwer: I muſt own, it is my Opinion, that the very ingenious Mr. *Tull* has ſo mathematically contrived his Drill-Plough, and ſome other Inſtruments, as to render them chargeable to make, and difficult to underſtand in their Uſes; and therefore rather above the Pocket and Capacity of common Farmers. But the three-wheel Drill Plough is ſo plainly put together, and may be made ſo cheap, that both theſe Objections have no Room, I think, to be offered by the meaneſt Farmer, conſidering its immenſe Value in preventing and deſtroying Weeds, keeping the Ground always in a Tilth, fertilizing the Crops, and keeping off the frequent deſtructive Blights and Mildews; to which laſt Misfortune, incloſed Fields, eſpecially, very much ſubject Corn; and which, I ſay again, is thus much prevented by the Interval,

val, that is allowed to drilled Wheat, Barley, *&c.* For here the Winds have ſuch free Acceſs to paſs, and the Ears and Stalks of Corn are ſo readily waved by the ſame, that the Mildews cannot eaſily make a Lodgment; or, if they do, a leſſer Strength of Wind will prove a Cure, when that Corn, which was ſown, and grows in a promiſcuous Manner, will ſuffer; and if I might write it without Self-praiſe, I would ſay, I believe I have done *Yorkſhire* an invaluable Service, by ſending this moſt neceſſary, improving three-wheel Drill-plough with its Horſe-break to *Scarborough*, in *February* 1738, which, I find, have ſince proved Models or Samples, to their Wheelers, or Plough-makers, for making more by, to the very great Advantage of the Northern Counties: And here I take the Opportunity of returning my Thanks to that great Promoter of his Country's Good, the Gentleman I ſent them to, who, beſides paying me my reaſonable Price for theſe two Inſtruments, ſome budded Cherry-trees, *Fulham* rath-ripe Barley-Seed, and a Sack of Tick-beans, was generouſly pleaſed to ſend me a Preſent of his Country's Produce. But there are ſtill further Advantages belonging to this three-wheel Drill-plough, and they are theſe, *viz.* by fixing two Pieces of Wood, or Sticks, to the Arſe of the broad Boards, they may be made to ſerve as a Harrow, by gathering and laying up the Mould, and leaving it in Form of a little Ridge on the Drill, ſo that this three-wheel Plough may be ſaid to plow, ſow, and harrow all at a Time with the Help of only one, or two Horſes at moſt; which muſt be of exquiſite Service to the Grain, becauſe it leaves ſuch a Covering on it, as not only ſecures it againſt ſeveral Sorts of Injuries, but alſo ſerves as a Dreſſing, or Manure, all the following Seaſon of the Year, by the Rain's waſhing down the nitrous

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Quality of ſuch Earth on the Roots of the Corn, while, at the ſame Time, it is collecting more from the Air it is thus expoſed to. The next Advantage I ſhall mention is in the following Account of Horſe-breaks.

*The double Broad-board Horſe-break.* This late invented Machine is certainly of excellent Uſe, when rightly and timely employed between Rows, of drilled Vegetables. In ſome Parts of *Suffolk*, and in *Middleſex*, they make Uſe of a Plough or Break with two broad Boards, which ſerves to break the Ground between Rows of their Beans and Peaſe, and for turning the Mould on each Side of their Roots; but ſuch Plough or Horſe-break muſt not be uſed in this Manner unleſs the Ground be very light and looſe, leſt the clotty Earth bruiſe and beat down the Stalks, and do more Harm than Good. However, to anſwer this Piece of Service rather better, the three-wheel Drill-plough, in ſuch Ground, will do very well, becauſe its two broad Boards, ſtanding very narrow, will open a Drill in the Middle of the Interval, and throw the Earth on each Side towards the Rows of Beans and Peaſe: Then, as ſoon as this is done, a Man, with the common Hand-hough, may directly follow, and pull up the looſe Mould to the Stalks, without doing the leaſt Damage, if he is careful in the Operation: And thus the Roots will have an Addition of Earth laid on them, to their great Improvement, whilſt they grow without being hurt by any of the weedy Tribe. But the following Sort of Horſe-breaks are much better.

*The Prong Horſe-break for Corn-ground.* There is a narrow Inſtrument of three Prongs, made a little crooked, ſome two Inches wide, and ſome ſharper, faſtened to a Beam, and made Uſe of by ſome of the acuteſt Farmers, that exquiſitely ſerves between Rows of Beans, Peaſe, Barley, *&c.* ſown

at

at twenty Inches, or two Feet Diſtance. Here this Prong-break is drawn between them with, commonly, but one Horſe in a narrow Wheel-carriage for looſening the Ground, and preparing it for the Work of another Inſtrument I am going to write of.

*The Plate Horſe-break.* This Machine is generally made Uſe of, when the Prong-break has before looſened the Earth once or twice, and killed, or hindered, the Growth of Weeds; then it is, that they draw this profitable Inſtrument between the Rows of Corn, Turneps, St. *Foyn*, Lucern, *&c.* which, being, ſome nine, others eleven Inches broad in a Sort of Plate of Iron, takes the middle Ground, and throws it to the Sides of the growing Vegetables, by drawing it between two Wheels, with two or more Horſes; where it adminiſters the ſweeteſt and beſt of Dreſſing, or Manure, to their Roots, and that in the moſt plentiful and cheapeſt Manner of all others, giving the nouriſhing Dews an Opportunity to lodge their Nitre in great Quantities, and, with the Help of the Prong-break, keeping the Ground in a continual Tilth, ready for ſowing Corn, Turneps, Rapes, Weld, Graſs, *&c.* every Year, for always, at the leaſt Expence and Trouble.

*The Hough Horſe-break.* There are three Sorts of Hough Horſe-breaks, actually in Uſe with Tenants, for improving their Crops of Corn, Graſſes, and Hops, *&c.* The firſt is made with three Houghs fixed to one ſtrong iron Handle, that is faſtened into a wooden Beam, and is made Uſe of, by Lodging its End on the Gallows-wheel Carriage of the three-wheel Drill-plough, which is now taken off, to make Room for this Hough-break; and with this, and two or more Horſes in Length, they ſtir and raiſe the Ground between the Rows of Peaſe and Beans ſowed in Drills, at two Feet aſun-

aſunder, to prevent and deſtroy the Growth of Weeds, and keep the Earth of the Intervals in a conſtant Tilth. The ſecond is made with a Hough and cutting Iron, for likewiſe ſtirring and moving the Earth between the Rows of Corn, *&c.* which, when done, a Man with a Hand-hough is to be employed, to pull up, and lay the looſe Mould on the Roots of the growing Vegetables; which Work is to be repeated, according to the Plough-maker's Account, that I have here tranſcribed in his own Words, as he ſent them to me, in the two following Copies of his Letters. And as to the third Hough-break, I have held it in a *Kentiſh* Hop-ground, where it does vaſt Service, by extirpating Graſs and Weeds between the Rows of Hops, and is made after this Manner, *viz.* There are nine little iron Feet, or Houghs, fixed in a triangular Frame of Oak, four in the hind Part, and two in each Side, and one before. The hind Houghs are four Inches broad each, the reſt narrower, and have one little iron Wheel fixed to the Point, or fore Front, which ſerves to keep the Houghs from entering too deep into the Ground, and cauſes the Break to be drawn the eaſier after two Horſes in Length. This Machine is about half the Weight of the great Turnep-hough-plough, which indeed, is ſo heavy, that it requires five Horſes to draw its fifteen Houghs; and tho' this Hough-break is light in itſelf, yet its nine broad Feet or Houghs make it ſo hard a Draught, that it obliges the Break-man to ſtop at little Diſtances, and, by its ſhort, two-fixed Handles, heave it almoſt out of the Ground, before he can proceed again; and then he leaves a Gathering of Earth behind him, which a Man with a three-tine Fork ſpreads about.

*The Maker's Character of the three-wheel Drill-plough, and two Sorts of Horſe-breaks.* Sir, I received

ceived yours Yeſterday, and, according to your Requeſt, I am very ready to ſerve you. The Charge of the Drill-plough, to ſow Wheat and Beans, will be four Pounds in my Shop, without Carriage to *London*, or elſewhere. I will put you in a Box to ſow Peaſe, and, by them three, you may ſow any Grain. As to the Break, I make two Sorts, one with three Houghs, thus, Δ, though in a regular Manner, to clear one ΔΔ the other, and break all the Ground. The other Break is a plain Hough of any Length, as your Corn is apart. The firſt is, I do ſuppoſe, beſt, where your Land is ſtrong and hard, and you deſire to go deep, for this with you may go half as deep as a Plough. The other will be as well, if your Land is light, and your Deſire only the Cutting up the Weeds. If you have the laſt, I commonly make three Houghs of different Lengths, and an Earthen Iron with them. The Charge of either of them will be thirty Shillings, the laſt with an earthen Iron, and the firſt without. Sir, if you pleaſe to ſend Orders for any Thing, ſend how wide the Wheels muſt go wideſt, and how narrow the narroweſt, for, if your Wheels go two Feet apart, your Corn will be one, and ſo to any Diſtance. Sir, pleaſe to ſend the Perſon's Name, to whom I am to deliver, to the *Cuſtom-Houſe-Key*, which I do ſuppoſe to be *Bear-Key*, or near it; if not, ſend me Word where. Sir, yours to command,

*Jan.* 22, 1738. *James Godden.*

*N. B.* There are three Sorts of notched or drill wooden Boxes, delivered with the Three-wheel Drill-plough; one for Wheat, the other for Beans, and a third for ſowing Peaſe. Now one of theſe little Boxes is to be put on the Spindle under the Hopper, according to the Sort of Seed you ſow; and, as he ſays, with theſe three, may be ſown

almoſt

almoſt any Grain. Alſo, with the ſingle Hough-break, he delivers three Sorts, with an earthen Iron, one of which Houghs is to be put into the Beam, as your Soil and Humour agree with it. For as a Shoe-maker at *Colcheſter* ſaid in my Hearing, when he was aſked by another, if he could make a Shoe that would fit his Foot cleverly.—He did not doubt to fit his Foot, if he could but fit his Brain.

*A Copy of the ſecond Letter.* Sir, I received yours of the 4th of this Inſtant *April*; and as to your firſt Queſtion, the broad Collar on the Beam, and the Chain with a crooked Link in the Middle of it, are to be uſed thus: The large Chain, which is faſt to the Beam, is to go that Hook at the hind Part of the Carriage to draw the Plough by, which very likely is plain to you: As to the broad Collar, that goes about ſixteen or eighteen Inches, from the Fore-end of the Beam, that goes between the Stakes with Holes in them, to go deep or flat, and lies on a Bolſter, which riſes or falls for the ſame Purpoſe. The Chain, with a crooked Link, muſt go through the third or fourth Link of the large Chain, from the Hook in the Carriage, and come up each Side, and hook to the Collar on the Beam ſo tight, that it may raiſe the large Chain a little upwards; which, when drawn forward, will cauſe the Collar-Chain to confine the Beam ſteady, ſo that the Plough will go the ſteadier for it; and ſome Plough-men, with us, will make their Ploughs go a hundred Rods, nay, a whole Day, without Holding, when turned in at the End, and that Collar is one great Means of doing the ſame. As for the Spring, in the Hopper, if you look and try, you will find that it riſes and falls by the Screw which ſtands upright in the Hopper, and the Uſe of that Spring

is to increaſe or decreaſe the Seed ſown. The ſmall Chain faſtened to the hind Part of the Iron, next the Side-wheel, is likewiſe to be made faſt to the Handle, for the Plough-man to take up the Wheel at the Land's Ends; but not ſo tight, but to give the Wheel Room to reach the Ground in a low Place, for, if it do not touch the Ground, it may as well ſtand ſtill. Mr. *Parker*'s Diſtance, I believe, for the moſt Part, is from ten to twelve Inches, or more, if the Ground is very foul, for ſowing Wheat. He ſeldom or never ſows one Sort of Grain two Years in one Ground, and, I believe, never makes a Fallow on Purpoſe for Wheat, but ſows it after Beans, and ſometimes a backward Piece of Peaſe, and a one Year, and ſometimes a two Year's Clover-Lay: But, for the moſt Part, his Peaſe came off ſoon enough to ſow Turneps. He ſometimes makes a Fallow in ſome of his pooreſt Land for Turneps, and, I believe, lays always ſome Amendment on that Fallow, which is Dung, Lime, or Chalks, as he thinks fit, as other good Huſbandmen do. As to the *Dutch* Hough and Horſe-break, that are to be uſed as often as you ſee Occaſion, the oftener you uſe them, the better Order you will find your Land in, when your Crop comes off. When your Peaſe and Beans are young, it will be a good Way, and which moſt do, to hough them, that is, draw the Earth a little to them on each Side, before you uſe the Horſe-break. So I have given you as good Directions as I can in every Reſpect, from yours to command.

*April* 7, 1739. *James Godden.*

*To*

*To Mr.* William Ellis, *at* Little Gaddeſden, *near* Hempſtead, *in* Hertfordſhire.

THIS coarſe Account of the three-wheel Drill-plough may, perhaps, ſeem to repreſent it, to ſome, an intricate difficult Inſtrument to underſtand, and for the Plough-man to hold. As to the firſt, I believe, I may ſay, it would not appear to a Farmer ſo, that had but a Quarter of an Hour's Explanation of its Parts. And as to the Second, I am ſure it is a Plough that is eaſier held than any other, becauſe it has two broad Boards, and always works in a Tilth, looſe, fine Earth: And I can further ſay, that it is the moſt likely Plough of any I ever ſaw, to come into common Uſe, where the Soil and Situation will admit of it; for this Plough will not anſwer in a very ſtony Ground, nor very well in ſtiff ridge Vale Lands. But in Chalks, Gravels, Loams, Sands, and, indeed, in all Earth that lies tolerably dry, and where a Drill can be eaſily made for ſowing Corn in, or artificial Graſſes, Turneps, Weld, Seeds of Trees, *&c.* it will do Wonders. The firſt Knowledge I had of this three-wheel Drill-plough, was at *Franken* near *Bath*, where Farmer *Clements* received it from his Landlord, who ſent it above a hundred Miles to him.

*The Prong Horſe-break, for keeping Hop-grounds clear of Weeds.* This Prong Horſe-break has four Irons, a little crooked, or bowed, like ſo many Coulters, hanging down from the Beam, in which they are fixed, and is guided by two ſhort wooden Handles, when held by the Plough or Break-man, and drawn by two Horſes, and a Boy to drive. With this Inſtrument may be looſened nine Acres of Ground in four Days, provided the Horſes are ſtout; and the Earth had been dug or tillaged in ſome

ſome Manner before, for this is not to be lifted almoſt out of the Ground at ſmall Diſtances, as the Hough-break is, unleſs it be at Turnings, and yet will ſtir and clean the Ground well of Weeds; and that if it be a little ſtony, which the Hough-break is not ſo proper an Inſtrument for. But this Machine which is about five Feet long in all, is uſed in ſome Places with five Prongs joined to a flat iron Bar, with Holes to let it go deeper, or ſhallower, which renders it ſo ſerviceable, that, after the Hop-alleys are the firſt Time dug by the Spade, about, or before *Chriſtmas*, ſome will uſe no other Tool all the Summer after, for keeping the Intervals clear of Graſs and Weeds, and for hollowing the Ground, to let in the Sun, Air, and Rains to the Hop-Roots, which it will effectually do, if drawn three or four Times in a Seaſon, both long, and croſs-ways, of the Interſpaces or Alleys. In ſhort, it is certainly the cheapeſt and beſt Invention of all others, for cleaning Hop-grounds, which when I firſt ſaw, I aſked if it did not leſſen the poor Man's Bread too much; but it was replied No, for that the Labourer did not complain, becauſe he performed his Digging the ſame Ground once or twice a Year, with the more Eaſe, when this Prong-break had looſened it before or after; and becauſe he was at other Times employed in Moulding up the Hills, Manuring the Land, Poling the Vines, and doing ſeveral other Works.

*The Hough-plough for Turneps*, &c. This is made with three ſtout Pieces of Oak, about three Feet and a half, or four Feet long each, in a triangular Manner. In theſe are faſtened fifteen ſmall Houghs, or Shares, or iron Feet, at the End of ſo many iron Rods: Eight in a hind Row, three on each Side, one in the Middle, with a little Wheel before, about eight Inches Diameter,

that

that ſerves inſtead of a Foot, to make it go eaſy, and to keep the Hough from entering too deep into the Ground. This Inſtrument will employ a good Team of Horſes to draw it, and then, when Turneps are very young, and apt to burn or ſet for Want of Time, or Hands to hough them: This Machine, by leaving only the eight Houghs in the hinder Beam, will ſo tear up ſome, and fit the remaining Turneps for Hand-houghing, that it may be performed with half the Trouble and Charge. Thus, when Turneps are taken, and grow full thick, this Hough-plough, or *Niget*, as it is called in *Kent*, ought to be made Uſe off before the Hand-hough, becauſe, by its two fixed Handles, a Man may dextrouſly guide it; and by heaving the hind Part up, and letting it down at Pleaſure, he can hough up ſome Turneps, and miſs others, as they ſtand thick or thin. But this is not all the Uſe that this excellent Hough-plough is put to; it is often employed in the laſt Plowing for Barley, and when it is here drawn by four or five Horſes, its fifteen Houghs will ſo looſen and fine the Ground, as to make it in a delicate tilth Condition, for ſowing Barley, which, above any Field Grain, requires a hollow clean Earth. The firſt of this Sort I ſaw at *Oatford* in *Kent*, where, after I had walked a Mile with the Plough-man, I gave him Six-pence to drink for the Sight of it, and for Hearing what he had to ſay of the ſeveral Uſes it was proper for; by which it may appear, that I have not come by theſe, and many other moſt valuable Secrets, without a great deal of Charge and Pains. By a little may be known, what a great deal means.

*The Prong Hand-hough.* This is a Hand-Inſtrument, made with three Irons, that are about half bent, ſomewhat like our Dung-rake. Theſe are joined to an iron ſhort Handle, that is put into a wooden

wooden Handle, or made Socket-wiſe, to go on a wooden Handle; which being raiſed into the Air with both Hands, the Labourer ſtrikes the Irons into the Earth, and then, with a Wrench, he looſens it, and takes up the Tool again for a ſecond Stroke, and ſo on. It is thus he hollows the Earth, kills and prevents the Growth of Weeds, and by this, adds a great Fertility to the Hop-roots, inſomuch that ſome Planters make Uſe of no other Inſtrument for this Purpoſe, than this, and the common Spade, with which they keep their Ground under a conſtant Tilth, free of Weeds; and it is ſo, that, with this Prong Hand-hough, one Man will dig or looſen half an Acre of Ground in one Day, for which he receives two Shillings.

*The Prong-ſpade.* As the Prong Hand-hough is only a Hand-tool, this is for both Foot and Hand, to ſupply the Uſe of the Spade. If the Ground is a little ſtony, this will eaſily penetrate with its four ſharp-pointed ſtrait iron Prongs, fixed in a wooden Handle, like a Shovel, with which a Man will dig about half an Acre of Ground in one Day, where the Earth has been lately looſened. Both this and the Prong Hand-hough ſerve excellently well to ſtir and hollow the Ground between the Rows of Hops: And in Fields, between the Rows of Beans, Peaſe, Turneps, Barley, Wheat, or artificial Graſſes, killing and preventing Weeds, to the great Improvement of Hops, and all *Sorts* of drilled Vegetables.

*The Beck-hough.* Is an Inſtrument differing from the common Pick-axe, or Mattock, only by having its two Ends about four Inches broad, with which they dig up the Ground of Hop-alleys: This, at *Farnham* in *Surry*, is ſo eſteemed, that there is hardly any other Tool uſed to weed their Hop-grounds, and to keep them clean and hollow;

for

for, by its Make, the Digger can enter the Earth deeper, than with either the Prong Hand-hough, or Prong-ſpade; and it is with this Tool that they keep their Plantations of Hops in a moſt fine Tilth, by uſing it two or three Times in a Summer, in one Hop-garden, to the great Benefit of poor Labourers, who are here pretty numerous, and yet maintain their Families well.

*The common Plate Hand-hough.* Is ſo well known, that I ſhould ſay nothing of it, was it not upon the drilling Account, for here its Uſe is abſolutely neceſſary, when the Drill-three-wheel-plough, or Horſe-break, cannot come near enough to turn up the Mould cloſe enough to the Roots of the Corn, Turneps, Graſſes, *&c.* Then it is, that this Inſtrument muſt be employed, to ſupply the Defect, which it will dextrouſly do, by being worked in drawing and laying up the Earth to all the Roots, even and cloſe to the very Stalks, which thus will prove a new Recruit or Dreſſing; to them a Labour, that ought not in the leaſt to be grudged, ſince it ſaves the great Charge of Manures, helps to bring forward an early Crop, and at the ſame Time deſtroys the deſtructive Weed, and employs poor Men. In ſhort, this common Hough, with which we hough all our Turneps, *&c.* and the great Service of the *Dutch* Hough, to hough between the cloſe Rows of drilled Wheat, are of prodigious Value to the Farmer in particular. — In my next Book for *July*, I ſhall give an Account of another pretty invented Drill-plough now in uſe for ſowing Horſe-beans on Vale Ridge-lands.

## CHAP. II.

### *Of Plowings, to be performed in* June *in different Soils.*

*Plowings in the* Chilturn. In this Month in the *Chilturn* incloſed Country, the firſt Stirree, or ſecond Plowing, after Fallowing in *April*, is ſometimes performed in *May*, but for the moſt Part early in this Month, preparatory for getting the Land in a fine Tilth, ready to ſow Wheat or Rye about *Michaelmas* next. In Order to which, there are ſeveral Sorts of Plowings requiſite for this Purpoſe, according to the Nature of the Soil; and therefore I ſhall particularly mention thoſe that are actually performed, in order for reducing the ſcorly, clotty, ſour Earth, into the fineſt and ſweeteſt Condition, in the quickeſt and beſt Manner, and firſt I ſhall begin with

*Broad-land Plowing.* In Chalks, Sands, Gravels, and ſuch light Soils, the firſt Stirree is generally performed by plowing the Ground in Broad-lands, as it was done the laſt Time at the fallowing Seaſon, but the Harrows ſhould precede this Plowing, and then it ſhould be done croſs the laſt Way. And, when the Earth lies in this Broad-land Poſture, we call it clean Plowing, or an intire Stirring of all the Ground; and thus it is certainly made fitter for the Fold than in any other Form; becauſe the Sheep lies here in even Ground, and dungs and ſtales in a regular Manner, which will cauſe the Grain to flouriſh in an equal Growth. In *Hertfordſhire* we commonly do this Work with a two-wheel Fallow-plough, or with the two-wheel Bobtal-plough, or with the pecked ſhare Foot-plough. In *Norfolk* and *Suffolk* with the two-wheel Jockey-plough; in *Surry*

*ry* with the one-wheel over or under cheek Plough; in ſome Part of the Weſt Couutry, with what they call their *Sull*, which to name properly, I muſt call it, a two-wheel very heavy Plough, and in *Kent* with their two-wheel Turn-riſe-plough: Or it may be done at this Stirree Time, after Harrowing, with the two-wheel *Hertfordſhire* double Plough, that excellently well turns two narrow Thoroughs or Furrows at once, and thus breaks the Ground better than any ſingle Plough.

*Plowing Land in Bouts.* If *Chilturn* Land is of the ſtiff and wetteſt Sort, Farmers commonly ſtir it in Bouts, croſs the Broad-lands; which indeed is a moſt excellent Way to break and level the Ground, if it is bouted twice ſucceſſively; becauſe this is the deepeſt of Plowings, and beſt ſerves to kill Weeds, ſweeten and fine the Earth, and expoſe it to the Power of the Sun and Air in the beſt Manner poſſible: Yet is there one Inconveniency attending it, and that is, when Sheep are folded on the Bouts, the Dung is apt to roll into the Thoroughs, and be buried by the next deep Bout-plowing; and for this Reaſon it is that a prudent Manager will harrow down a Fold-courſe, croſs the Field before the Folds, and, when this is finiſhed, he will harrow down another, and ſo on; which prevents the Misfortune, by laying the Ground firſt all even, otherwiſe, at Harveſt, the Corn will be found to grow in ſome Places thick, and ſome thin. To the great Damage of the Farmer, Bouting here is performed with the two-wheel Fallow-plough, Jockey-plough, Bobtail-plough, Turnriſe-plough, or with the one-wheel Plough, or pecked Share-foot Plough.

*Plowing in two-bout Lands, or four-thorough Stitches.* This Work, in the *Chilturn* ſtiff Grounds, is often performed as a firſt Stirree in this Month, by harrowing the laſt broad Lands plain, and then

plowing it into two-bout Lands, or what we call four-thorough Stitches, croſs the laſt Plowing; and is a good Way to break, fine, and ſweeten the Land for ſowing Cole, or Rape-ſeed, Wheat, Rye, *&c.* at the next Seaſon, becauſe this Form breaks and expoſes moſt Part of the Ground to the Sun and Air, in a higher Situation than it lay in Broad-lands, keeps it from lodging Waters, and lays it ready for Four-thorouging it again next Time. But on this Sort of Plowing we ſeldom fold, but dreſs the Ground with Dung, or Hair or Hoofs, or Trotters, or Horn-ſhavings, Sprats, and ſuch like, by plowing it in, and ſowing Wheat at the ſame Time in theſe four-thorough Stitches. Another Way is to hack or comb the Ground, and is ſo good a Sort of Plowing, to ſhorten and ſweeten the Earth, that it is more and more practiſed, for Reaſons I am going to ſhew; but, before I conclude this Article, I ſhould ſay, that this Sort of Plowing is beſt performed with the Wheat-ſeed two-wheel Plough, becauſe this plows the narrowſt of any of the two-wheel Sorts.

*Plowing Lands in Hacks or Combs.* This is a Sort of Plowing much uſed of late in *Hertfordſhire* eſpecially, and is by many put in Practice in both our *Chilturn* ſtiff and ſhort Soils, as the firſt Stirree in this Month, by plowing the Land a-croſs the laſt Broad-lands in Hacks or Combs, and thus reduces a clotty Earth fine in a little Time, and greatly prevents and deſtroys the Growth of Weeds, as it may be performed with the two-wheel Fallow-plough, Peck-ſhare Foot-plough, Jockey-plough, wooden-chip two-wheel Plough, Turn-riſe-plough, or over-cheek one-wheel Plough, to the Farmer's great Advantage. And, in this Month, this Operation is wanted more than at any other Time, for folding Sheep on the ſame. If you fold on Broad-lands, the Sun has ſo much

Power

Power at this Time of Year, that, if it is fair Weather, the Dung and Stale of the Sheep, will in a great Meaſure be dried up, and a great deal loſt; whereas, by folding them on this hacked Ground, the Feet of the Sheep, by Morning, will pull down the ſmall Ridges, and cover both their Dung and Urine ſo well, that, when they are let out of the Fold, the Ground will lie ſmooth, that, before they went on it, lay in a very rough Manner. *N. B.* If you plow the Ground well, in dry Seaſons, this Year, you may depend on it, it will plough the better for it the next Year, and become a fine Tilth the ſooner. But, for a further Account of theſe ſeveral Sorts of Plowing, ſee my Vale and *Chilturn* Farming Book, where I have wrote much larger, than a Monthly Book will admit of.

*Vale Plowing.* Here they ſtir their Ridge half Acre and Acre Lands commonly twice before Harveſt, by Ridging up each Time with the Foot-plough; others will plow and ſtirree but once before Harveſt: If twice, they ſtirree in this Month, and the other in *July*, juſt before they begin to reap; but this Work is governed partly by the Seaſon of the Year, and the Condition the Ground is in: If the Thiſtles and Weeds grow high and thick, they ſtirree twice, if not but once; and, in Caſe it is a very dry Summer, once will then do better than twice in a wet Summer.

*Plowing Size or Bout-lands in low Situations.*— In *Acton* Pariſh in *Middleſex*, and in many other Parts of that County, after having fallowed their low, wettiſh, clayey, or ſtiff loamy Ground in eight Thoroughs, or four-bout or three-bout Lands, they ſtirree it the Beginning of this Month, by plowing it the ſame Way again with their Swing-plough, and make a new Ridge where the laſt

try, for ſowing Turneps, and to make them lie dry in ſpewy wet Grounds, becauſe the Bouts leave a hollow Thorough or Furrow between their ſharp Ridges; which, though imperceptible after Harrowing, yet ſerve for draining ſuch Land, and doing the Crop a great Deal of Service in Winter, and great Rains. And thus ſuch ſtiff Earth is got into a fine Body in a little Time, and made full of innumerable Pores and Cavities, which ſerve as Receptacles for the ſmall Seeds of Turneps, and for a Lodgment and Nurſery of their minute thready, fibrous Roots. This laſt Sort of Bout-plowing we perform in *Hertfordſhire*, with the two-wheel Fallow-plough. But when the laſt Plowing for Turneps is to be done in Broad-lands, as it commonly here is, then the Plowing may be done with either the Fallow-plough, or the two-wheel double Plough; which laſt is capable of diſcharging three Acres a Day, with only four Horſes, that go in a double Row, and which will work the Ground finer than the ſingle Plough can, for Reaſons I ſhall give in next Month, when I write a Deſcription of it.

*Plowing a wet clung Ground the beſt Way for a Crop of Turneps.* If it be an Oat-ſtubble, or Bean-ſtubble, fallow it in Broad-lands in *April*; the latter End of *May* hack or comb the ſame Land croſs-ways: In *June*, juſt before the laſt Plowing, harrow a-croſs, and plow it clean overthwart the Combs into Broad-lands: Then harrow it plain, and ſow your Turnep-ſeed, which harrow once in a Place. But if the Ground lies clotty, after the laſt Plowing, then it ſhould be twice or thrice harrowed before you ſow the Seed, that it may the ſurer take Root, and the Turneps be the eaſier houghed.

*A Crop of Turneps got on a Fallow.* On Fallowing or by plowing the Ground, only once off the

the old Stubble, Turnep-ſeed has been harrowed in, and proved a good Crop by a Chance in a gravelly Soil, becauſe this Sort of Earth is commonly as fine with once Plowing, as a ſtiff Clay or Loam will be with two Plowings.

*A Crop of Turneps got without Harrowing.* Another Field, that was a Tilth, being ſowed with Turnep-ſeed, was never harrowed afterwards, becauſe, juſt as the Seedſman had done Sowing, a great Shower of Rain fell and hindered it; yet it proved a fine Crop. In warm rainy Weather, in a fine Tilth, and well dreſſed Ground, Turneps will make their firſt Appearance in four or five Days, but in long dry Seaſons ſometimes not under three, four, or ſix Weeks.

*An Oat-ſtubble plowed for Turneps.* This Field was a loamy Gravel, that was got ſour and grazy; therefore, in *January*, it was fallowed a-croſs the laſt Broad-lands into Broad-lands again. In *March* it was harrowed plain, and hacked a-croſs; then, in *May* the Hacks were harrowed down plain, the Field well dunged and preſently plowed in. In this Poſture it lay till about *Midſummer*, when the Dung got pretty well mixed with the Earth. Then, after it had been harrowed plain, the Land was plowed, and the Turnep-ſeed harrowed in once in a Place. But this is ſeldom practiſed, to give Ground for ſeveral Plowings for Turneps; nor would it have been done here, had not the Land been very clung, and run over with twitch or couch Graſs.

*A Green Pea or Peaſcod-Stubble plowed for ſowing Turnep-ſeed.* Where Peaſcods have been gathered, or other Peaſe are ripe and cut off, there you may, in ſandy or other light hot Ground, give it one Plowing, and harrow in Turnep-ſeed. This is frequently done in many Places, eſpecially where the *Carolina*, Maſters, Hotſpur, and other forward

Peaſe are ſown, by the three-wheel Drill-plough; and thus by ſowing Turneps the latter End of this Month, particularly the *Dutch* Sort, you may have a Crop of Wheat ſucceed.

*A Hog-pea Stubble plowed for Turneps.* This Stubble was alſo on a loamy Soil that lay in Stitches. The Farmer fallowed them, in *April*, croſs-ways, into four-thoroughed Stitches again. In *May* he bouted them. In *June* he thoroughed them down, harrowed the Ground plain, and ſowed and harrowed in his Turnep-ſeed. Now to make a due Preparation for obtaining a good Crop of Turneps, the Beginning of *May*, as ſoon as he had plowed his Land in Bouts he harrowed down as many Bouts as ſerved for a Fold-courſe: When one Fold-courſe was dreſſed, he harrowed down another, and ſo folded on till he had done the whole Field, and plowed and ſowed it with Turnep-ſeed. But the making of four-thorough Stitches croſs four-thorough Stitches, is a very unuſual Way, becauſe the Share cannot go to the Bottom of the old Thoroughs; however, ſome think it right, on Account of the Ground being broke ſhorter, by ſuch Croſs-plowing, than it would be, if plowed long-ways.

*Another Way.* But ſome of our Afternoon Farmers fallow their Stubbles, as late as the Beginning of *May*, which they let lie till the latter End, and then plow a-thwart by hacking the Ground with the Fallow-plough. In three Weeks Time after, they harrow a-croſs; then dung and plow a-croſs again into Broad-lands for a Crop of Turneps. But this is poor Husbandry, and often the Cauſe, that many Crops have miſſed, becauſe the Earth has not Time to lie, and get ſufficiently ſweet. For a Farmer ought always to remember this Maxim——*That late Plowings make bad Tilths.*

*To prepare a Bean-ſtubble for Turneps.* - It was bouted overthwart the Broad-lands, in *January*: The Beginning of *May*, it was back-bouted. The Beginning of *June*, it was thoroughed down. At the latter End, it was harrowed plain, then dunged, plowed, and the Turnep-ſeed harrowed in. This was performed in a wet, loamy, flat Field of Land in the *Chilturn* Country.

*Sowing Turnep-ſeed in Drills.* In this Poſture, Turnep-ſeed may be ſown out of a Hopper of the Three-wheel or Pulley Drill-plough, in ſhallow Drills, which may be afterwards cloſed by Houghs, Harrows, or by two Sticks, fixed behind the broad Boards, which leave the Drill under a ſmall Ridge; and this by only altering or ſhifting the round cog Inſtrument under the Hopper, that is proper to drop out this ſmall Seed. For this Purpoſe, the Land muſt firſt be got into a very fine Tilth, by frequent Plowings with the common Plough, and, if you can, dunged ſome Months before with Muck rotted very ſhort beforehand. The Drills may be made from two to ſix or eight Feet Diſtance: If left very wide, then Wheat may afterwards be ſown in Drills between the Turneps. Here Turneps will thrive much better, than thoſe ſown in the random Way, becauſe, in the drieſt Seaſons, and in the drieſt Soils, they will come up in leſs Time, though leſs Seed is ſown this Way on an Acre of Ground, than when ſown Broad-caſt. Alſo, in this drilling Poſture, Turneps are prevented from burning, or growing yellowiſh in their Leaves a long Time; are eaſier houghed, better ſecured againſt the Slug, Fly, Worm, and Caterpillar, and from that common deſtructive Turnep Diſeaſe, which in the ſandy Grounds of *Norfolk* frequently happens to great Numbers of Acres in a Seaſon, and is there called—*Anbury*—and which in a little Time reduces one Acre of fine large

Turneps, worth thirty Shillings, to be worth no more than five. By theſe Ploughs, Turnep-ſeed may be drilled on level Ground, or on Ridge-lands, and, by being houghed by the Break and Hand-hough in the Intervals, Wheat may be ſown in *September* to great Advantage; after which the Turneps may be carried off, and ſold or eaten elſewhere, that the ſame Ground may either lie fallow, till Barley or Pea-ſeaſon, or Cole-ſeed, or artificial Graſs, may be drilled in the inner Spaces to great Profit. Or, I have known this done, in the Months of *April* or *May:* You may ſow white, blue, or hotſpur Peaſe in Drills, at ſix Feet aſunder, and at the ſame Time harrow ſome *Dutch* Turnep-ſeed, ſown Broad-caſt, in the Intervals, or it may be drilled in, as I ſaid before, and afterwards houghed; by which Management, the Ground may be all cleared at a Time, to drill in Wheat, or ſow it in the common Way. Sands, Gravels, and dry and moiſt Loams are the moſt natural Soils for Turneps, and ſo are ſome Sorts of rich moiſt Chalks; but the dry, ſhallow, hurlucky Sort is too dry for Turneps to thrive in, for here they will lie ſo long before they get into a third or fourth Leaf, that they will be in great Danger of being devoured by the Fly and Slug, unleſs the Weather be very rainy. But this drill Way of ſowing, with good Manure beforehand in the Ground, will make ſuch Earth hollow and rich, and cauſe the Seed and Turneps to grow by the Help of only Dews, and the ſhallow Cover of looſe Ground, to great Perfection, but the Drills muſt not be made too deep, leſt the Seed be buried; and for Security, after ſome Earth is pulled down by the Hand-hough on the firſt Sowing, more Seed may be ſown on that, and covered. Thus you will have two Comings up of Turneps, and the ſurer ſtill, if you ſow old and new Turnep-ſeed, which will prove another Security

rity againſt the Fly and Slug, for, if one is eaten, the next may ſtand. Or, beſides what I have written before of ſowing Peaſe, or Wheat, Broad-caſt between the Rows of Turneps: You may drill the Turneps at ſix Feet aſunder, and afterwards ſow Wheat in a Drill in the Middle; and after, the Turneps are either eaten off by the Incloſure of Hurdles with Sheep, or pulled up and given elſewhere to Cattle, Peaſe, or Barley, *&c.* may be drilled in their Room; ſo that both Crops may be got off almoſt together. However, this drilling Practice will not anſwer in too ſtony Grounds, nor in too wet Grounds, nor even in ſome very dry looſe Sands, becauſe the Sands will tumble down ſo faſt after the Share, that the Drill will be filled before the Seed can fall in; but, where ſuch Earth will ſtand long enough for the Seed to fall in, it will anſwer to good Purpoſe. Remember, that, the richer the Land, the later you may venture to ſow Turneps, either in Drills or Broad-lands, for, in ſuch a Soil, latter ſown Turneps will overtake thoſe ſown ſome Time before in poorer Earth; and, whenever you ſow Wheat after Turneps, there ſeldom fails a good Crop. Do not be ſo much afraid of burying your Turnep-ſeed in Drills, as to let it diſcourage you in this Drilling-work, for it has been found that Turnep-ſeed, like Spinage-ſeed, will come up at three or four Inches Depth; but, if you doubt this, you may, as I ſaid before, ſow another Parcel of Turnep-ſeed out of the Drill-hopper, or Hand, on the Top of the Firſt, and with the Hand-rake, or with a ſingle light Harrow, you may cover the ſame with a ſufficient Quantity of Earth.

*Plowing and Sowing Turneps in Vale Grounds.*— The aforeſaid Operations, by Diverſity of Ploughs are not to be performed here, becauſe in theſe Situations they never plow but one Way; and that is done ſometimes by ridging up, and ſometimes by caſting

caſting the Ground down with the Foot-plough. Here the Land generally lies in Acre and half Acre Lands, but for the moſt Part in the latter. Where their Soil is a black or bluiſh, rich, clayey Loam, they dare not ſow Turneps in it; for, if they ſhould ſow Turneps in this rank, dirty, wet Ground, it would be very likely attended with ill Conſequences; as, their running into little Roots, and great Stalks and Leaves; and, if it ſhould happen, that they take well, and be a full Crop, yet then it will not anſwer, becauſe the Sheep, in eating them off, will ſtolch the Ground, daub the Turneps, eat their Food in Miſery, and perhaps, get rotten into the Bargain; and, if they are drawn to be fed on Meadow, or more dry Ground, then there will remain ſuch hollow Places, that, in this ſtiff, wet Soil, will prove ſo many Receptacles for the Lodgment of Waters, which in Courſe will ſour the Earth for Years after, as I have known done, and greatly damage the ſucceeding Crops; beſides which, there will not be Time enough allowed, for giving the Land any more than one Plowing for Barley; and then, I believe I may ſay with Aſſurance, that there will be ſuch a bad raw Tilth, as to cauſe a very poor Return at Harveſt, as has been proved in ſeveral Places in the Vale of *Aylesbury*, and even upon the very Edge of it, in the Pariſh of *Eaton*, as I ſhall in another Place, more largely treat on. Yet is this Caution not without Exception, for in ſome Vales, as well as the Vale of *Ayleſbury*, there are many proper Situations and Soils fit for Sowing and Eating off Turneps on the ſame; as Sands, ſandy Loams, ſandy Clays, whitiſh Ground, gravelly Loams, and intire dry Loams, that will very well admit of this Practice. Examples of theſe Caſes take as follows, *viz.* In the Pariſh of *Chedington* in *Bucks*, there is a great deal of open Field, whitiſh, hilly Ground,

that

that is, of a very rich Sort, and lies in ridge half Acre Lands, and always plowed one Way. Here they ſow and get excellent, ſweet, large Turneps, that they hurdle out, and feed Sheep with, to great Advantage; and yet, in another Part of the ſame Pariſh, they dare not ſow any Turneps, becauſe their open Field Ridge Lands are of a black or bluiſh clayey Loam, as I have before obſerved. Likewiſe near *Ayleſbury* Town, in their open Field rich dry Loams, that lie in Ridge and Thorough Lands, they every Year in one Place or other, get vaſt Crops of good Turneps. The ſame in that large Tract of open Field Land, lying between *Hockley* and *Wooburne*, in *Bedfordſhire*, where the Soil is a ſandy Clay, and ſo wettiſh, that they are forced to plow it only one Way as Ridge Vale Lands are done. Here they ſow Turneps, and eat them off with Sheep; and, in tolerable dry Seaſons, they will thrive well, and be fat for the Butcher. Cart Dung, if laid on late on the laſt Plowing, often proves a bad Dreſſing, becauſe it is apt to burn the Turneps. Folding is certainly the beſt Dreſſing for Turnep Land.

*Several Sorts of Turneps, and their proper Soils.* In the ſandy Lands of *Suffolk* and *Norfolk*, they ſow the moſt Turneps of any two Counties in *England*, for feeding their Horſes, and for feeding and fatting their *Welch* and *Scotch* Runts and Sheep, for which Purpoſe, they ſow the Cream-coloured *Dutch* Turneps, the Yellow, the Purple, and the Green, and the Red Sorts as follows: *viz.*

*The Cream-coloured* Dutch *Turnep.* This Turnep is of a flattiſh Shape, and of a middle Size; is of a pleaſant Cream Colour, and more ſown by Gardeners than Farmers, becauſe of their quick Growth for an early Market; for this Sort will be fit to pull in eight Weeks Time after Houghing, if the Seed is harrowed in forward in the Month of *May*, or in this Month, provided the Soil

Soil is of the dry warm Sort, is well dreſſed, and got into a fine Tilth. And, though it naturally is a ſmall Turnep, yet, by growing in a rich Earth, they will become pretty large, and therefore are ſown by ſome Farmers, as a common Field Turnep, to fat their Sheep, as the firſt Crop to be eaten off Time enough to plow and ſow Wheat. But in ſandy Land, eſpecially when they are ſown forward in *April*, or *May*, and the ſucceeding Weather is dry for ſome Weeks together, theſe Turneps are very apt to become corky, and unfit for Man and Beaſt, as it happened in that long dry Spring-ſeaſon 1741, when the Gardener's firſt Crop proved good for little, ſo that hardly a good Turnep could be got, till a ſecond Crop was pulled. This Turnep will grow in Sands beſt, but refuſes neither Gravels, Chalks, Loams, nor any ſtiff dry Earth.

*The Yellow Turnep.* Is of the Carrotty Kind, and the ſweeteſt of all others. Therefore the *Suffolk* and *Norfolk* Farmers ſow ſome Acres of them in their incloſed and common Fields, for their Horſes as well as for fatting their Sheep and Runts, becauſe this Turnep is ſo luſcious and fattening, that they give them as Manger Meat to ſave Corn; for, with theſe and Hay, or with good Straw and Chaff, they will hold to work well; and, indeed, it is happy for theſe Farmers, that ſuch a Root was created, by Reaſon their ſandy Grounds are of the wrong Sort of Soil to bear good Crops of Wheat, or artificial Graſſes. With theſe Turneps, Sheep and Runts will fat a great Pace, by eating them as they grow on their dry Land; and, in more wettiſh, they may be pulled up and be given to the Beaſts, in a Manner, under Cover to great Advantage. A dry deep Soil is the moſt natural Sort for this Turnep.

*The green Sugar-loaf, or Tankard-turnep*, Is one of the Sorts ſown in *Hertfordſhire*, and many other Places; has the thickeſt Rind or Skin of all others, and for which it has the moſt Occaſion; becauſe this Turnep ſtands the higheſt in the Air of any, and therefore the moſt expoſed to Froſts, which it will wonderfully reſiſt, and maintain itſelf ſound, unleſs the hard Weather continues long and violent. It is a ſweet Turnep, and well beloved by Sheep and Cows, growing very large in rich Ground, and this more eſpecially, becauſe the Cattle can eaſily come by a full Bite of it. But there are ſome Inconveniences attending this Turnep, and they are theſe: If Tankard-turneps ſtand too long they are apt to grow corkey, or rot, and make Cattle pine away inſtead of fattening them: The Tap, or ſingle Root, alſo of this Turnep ſtands with ſuch little Hold in the Ground, that its large high Body is not able to ſuſtain the Bite of a Sheep, but is often broke off in their Feeding, and then it is rolled in the Dirt and refuſed by Cattle. This Turnep is one of them that ſhould be ſown early, for, if you ſow it later than ordinary, it will run only into Leaves and not bottle; and, whenever you ſow it, it ought to be in a deep Soil, that its ſlender Root may meet with the better Encouragement to ſtrike a good Way down, grow the faſter, and ſtand the ſtronger. Then it will proſper in any Ground; but, be ſure to get right Seed, for the worſer Sort is ſold for Six-pence a Pound, when the better is for two Shillings.

*The green round Turnep*, Is an excellent Sort, and of late more and more ſown in *Hertfordſhire*, and elſewhere, becauſe the true Turnep of this Kind grows large and ſweet, and is not ſo ſubject to be ſpoiled by Froſts, as the green and red Tankards are, and yet ſtands enough above Ground for Sheep and Oxen to come at the greateſt Part of it; will bear Scooping well, and its Shell eaſily dug up.

This Turnep, as the laſt, ought to follow the *Dutch* Turnep, as the ſecond or next ſucceſſive Crop to that, and therefore ſhould be ſown the latter End of this Month, or in next, at furtheſt. This is a general Turnep, becauſe it will proſper in moſt Soils, and is as good for the Kitchen Uſe, as it is for feeding Cattle in the Field: This is the moſt general Turnep that we ſow for our Sheep in *Hertfordſhire*, at this Time, and therefore allowed to be the beſt Sort.

*The red Round or purple Turnep*, is a hardy Sort of Turnep, of the hotteſt Nature, and therefore will endure Sowing the lateſt of all other Field Turneps, becauſe it will beſt withſtand the Severity of Froſts and Chills of Waters. This is accounted one of (if not) the largeſt Turnep that grows, and may be juſtly called a true, Winter, good Turnep, for, if it is ſown in *July* or *Auguſt*, it will hold good and fit for feeding Sheep to *Lady-day*, and in ſome kind Seaſons, till mid *April*. But, if ſown early in this Month, they will be apt to grow and run into Seed in *January* or *February*. There have been many Acres ſown with this Turnep, on only one Plowing up of a Wheat, Barley, or Pea-ſtubble, in *September*, and, when houghed in Time, proved a valuable late Crop for feeding Sheep, and other horned Cattle, when no Vegetables beſides could be had. This Turnep and the green Round will beſt bear Tranſplanting for a Seed-crop, of which I intend to give an ample Account in the proper Month; and it is theſe two Sorts, as well as the *Dutch* Turnep, that will grow in the ſhalloweſt Soils; the beſt of any is of the thinneſt-ſkinned Sort, and eats ſweet, when very young; but, if it is pulled, when old, it is hot and bitteriſh in the Mouth. I once bought of this Sort of Seed at the three *Wheat-ſheaves*, by *Billingſgate*, that grew ſo large,

large, in a gravelly, loamy, incloſed Field of my own, and kept ſound and good ſo long, that tempted my Brother Farmers to beg ſome of them to tranſplant for Seed, for all of them ſaid, they never ſaw ſuch a fine Sort of red, round, large Turneps in *Hertfordſhire* before. In ſhort, for the Sake of their growing in ſtiff, wettiſh Loams the beſt of any, for their appling and thriving in Winter, when the Tankards will run only into Leaf, and for their growing the lateſt of all others, this Turnep ought to be preferred for ſowing in Drills, or in Broad-lands, or in two, three, four, or ſix Boutlands.

*The red Tankard Turnep.* Some of this Sort are very excellent Turneps; but the true Seed is very difficult to come by. I have had this Sort of Seed from the *Three Wheat-Sheaves*, that produced a delicate, clear, hardy, great Turnep; for there is a vaſt Difference in the Seed, both of this, and the green Tankard; ſome will grow almoſt out of the Ground, and therefore are much expoſed to Froſts, and ſo eaſily puſhed down by Cattle, that great Numbers are ſpoiled by them. But a true Sort of theſe are thoſe Turneps that grow with almoſt as much of their Body in the Ground as out of it; ſuch as theſe contain a great deal of Meat in them, and, when a Farmer is poſſeſſed of ſuch, let him make much of them, and not loſe their Seed; as many have done in our Parts, whom I have heard ſay, could they have ſome of the ſame they formerly had, they would not grude to give five Shilling a Pound for it. The red Turnep delights in Gravels and Loams. But this, as well as the green Tankard, in hard Weather, is pecked by Crows, Rooks, and Pigeons, and then the Rain gets in, and rots them.

*The Rat-tail Turnep.* So called, becauſe of its piky Root, which runs down a conſiderable Length

into the Earth, has ſmall Leaves and a green Ring round a little white Turnep, is one of the ſweeteſt of Turneps, but too ſmall to be ſown in Fields for Cattle; therefore is much valued by ſome Gardeners for Kitchen Uſes. It is ſo hardy, as to grow in Winter, when others do not, and may be ſown all the Summer long.

*The Navets, Navew, or long* French *Turnep*, is much made Uſe of late for improving Soups, as one of the beſt Sort that is for this Purpoſe; therefore only ſown by Gardeners for Kitchen Uſe, in any of the Summer Months.

*Good and bad Turnep-ſeed.* Some ſow old Seed, others new. The Difference is this: The old will not come up ſo ſoon as the new; but then it is the ſurer Crop, becauſe it is longer making its Roots. The new Seed ſtrikes Root ſooner, and therefore the eaſier overcome, and killed by Heats and Droughts, and by the Fly and Slug. On this Account, a prudent Farmer will ſow half one Sort and half the other, for if the firſt is ſpoiled, the ſecond has a Chance to miſs the like Damage; and as both theſe, by being mixed, lie in different Parts of the Surface of the Earth, they will have alternate Sproutings, to the greater Hopes of a Crop. The largeſt of all Seed is the beſt, and if Turnep-ſeed was full ripe, and got in dry, it will be of a black Colour; but refuſe the mow-burned red, or ſhrivelled Sort, for theſe will not grow to that Perfection as could be wiſhed.

*To prove the Goodneſs of Turnep-ſeed.* Take a Pint of good black Seed, and weigh it againſt a Pint of greeniſh or unripe, or the reddiſh Sort that is mow-burned, and the heavieſt will prove the Goodneſs. Alſo put ſome into a Fire-ſhovel, and, if it cracks and bounces over the Fire, it is good; but, if it only burns away in Smoak, it is bad.

*Sow-*

*Sowing Turnep-ſeed on Broad-lands.* Here Regard ſhould be firſt had to the after Uſe the Ground is to be put to. If you intend to ſow the ſame Land with Wheat, then ſow the *Dutch* forward Turnep, to be eaten of in *September* or *October*. If you would have them ſtand Part of the Winter, ſow the green Tankards or green Rounds; but if the whole Winter, then ſow the red Tankards, or red Rounds, for your Sheep or Bullocks. Again, in Caſe your Ground is a wettiſh Soil, here ſow the Sugar-loaf, or one Sort of the Tankards, for, the upper Part of this Turnep growing pretty high out of the Earth with a thick Skin, the Sheep may have eaſy Acceſs to their Food, and the Water leſs Power to hurt it: And thus you may manage your Turnep-crop, by ſowing the proper Seed in a due Seaſon, for early or late Feeding, for pulling up, or eating them on the Spot, for ſowing of Wheat, or Rye, or Barley or Peaſe after them, *&c.* This being commonly the drieſt Month in the Year, and the Fly of the greateſt Power, it proves a Caution to many Farmers, not to ſow their Turnep-ſeed ſo ſoon as the Ground is harrowed plain, but to let it lie a Day or two afterwards, and then ſow and harrow in the Seed, becauſe the Fly is apt to follow the Duſt. When Land is well folded, or dunged and plowed till it is got into a fine Tilth, and made ready for Sowing, do not grudge Seed, for there have been thouſands of Acres of Turneps loſt for Want of a Pound more than is uſually ſown on a Acre. My Quantity is never leſs than three Pounds on one Acre, and ſometimes four, if the Tilth be rough; the more the better, that there may be enough for the Farmer, the Slug, and the Fly. Now our Method of ſowing Turnep-ſeed on Broad-lands is this: Firſt, he begins to ſow half a Broad-land, which is about four Steps and a half

a half broad, by ſtepping along, within a Foot of the Outſide, and at every ſecond Step, with the Right-hand, he throws a Caſt from between his two Fingers and Thumb: When he has got to the End of the Land, he comes all along the contrary Side, and ſows here, as he did at firſt, by which two croſs Caſts, the Ground is ſown twice in a Place, and ſo on till the Field is all ſown; then he immediately harrows all the Seed in once in a Place, and leaves it till the Turneps are grown into their fourth Seedling-leaf, when they ſhould be houghed.

*To ſow Turnep-ſeed in two, three, or four Bout-lands.* Where Land lies low and wet, and will not admit of Turneps to grow on Broad-lands, then the Farmer muſt alter his Mode of Plowing and Sowing. If it is to be done in two-bout Lands, or what we call four-thorough Stitches, then, when the Ground is got ready for Sowing, harrow down the Stitches or Ridges long-ways, almoſt level, and then ſow and harrow in your Turnep-ſeed; for here your Turnep-ſeed is to be ſoon Broad-caſt all over the Land, by croſſing the Caſts, and ſowing five Stitches in Breadth, at a Time, and ſo on, till the whole Field is finiſhed; and, by this Operation, there will remain a ſmall looſe Thorough between the Ridges, enough to drain off the Waters from the higher Ground, unleſs a Flood of Rain happens; for, by harrowing down the Earth from the Ridges, there will lodge a great Deal of looſe Mould, which will receive and bury the Wets, ſo that the Turneps will lie much drier, and in a hollower Condition, than if ſuch Land lay in Broad-lands. If the Ground lies in three or four-bout Lands, it is, becauſe the Situation of it is very low, and wetter than that of the two-bout Lands, and yet not ſo wet as the Ridge Vale Lands. For Sowing Turneps in three and four-

four-bout Lands, they fallow between *Allhallows-tide* and *Chriſtmas*, by plowing two of theſe Lands into one. Then, when they have done Sowing their Horſe-beans, they make their firſt Stirree, and plow, two of the laſt double Lands into one, which makes an intire Broad-land, and lays the Ground almoſt level. The next Time, the ſecond Stirree or third Plowing is performed, and then, they hack the Ground a-croſs with their Swing-plough, the Beginning of this Month, which is quickly followed with Harrowing the Land down by their five-beam Harrows. Then about the latter End of this Month, or the Beginning of next, they plow a fourth Time croſs-ways into Broad-lands again, which they harrow firſt, and then ſow and harrow in their Turnep-ſeed. This ſeveral do, but others only harrow, ſtirree twice, and then ſow their Turnep-ſeed. This is the Practice of the *Middleſex* Farmers, but few of them ſow Turneps.

*Houghing Turneps.* On this abſolutely depends the obtaining a good Crop. It is true, that I have known ſome of the worſer Sort of Farmers content themſelves, to ſave Charge, with only Harrowing a thick Crop, with two of our common four-beam Harrows, which will thin the Turneps, and tear up the beſt as well as the worſt Plants. Others, where the Crop is thin, will not hough at all; but theſe are your Afternoon Farmers, as we call them: For, to enjoy a Pay-rent Crop of Turneps, they muſt be hand-houghed in due Time, that is, when they have made their fourth Leaf a little ſubſtantial, to prevent their Burning, or too much heating one another by their too cloſe Standing, otherways, they will become ſtunted, and grow to little Profit. Now to do this Work effectually, in the firſt Place I make a Bargain with my Houghers, to go over the Crop twice, the laſt

Time

Time about a Week or Fortnight after the firſt, to hough up and deſtroy thoſe young ones that may have eſcaped the firſt Houghing; which is more than ordinary neceſſary, if the Weather happens to be wettiſh in the firſt Houghing-time, for then many Turneps will up-ſet, and, though houghed before, will grow again. For both which Houghings, at *Gaddeſden*, that is computed to be twenty-eight Miles from *London*, we pay five or ſix Shillings for each Acre of Ground, and ſeldom or never more. But, where many Acres are ſown, it often happens, that the Houghers cannot do all, or even the greateſt Part of them, Time enough to ſave the reſt from burning. In this Caſe, the triangular Hough-plough, that I have already deſcribed, will dexterouſly thin ſeveral Acres in one Day, and excellently well prepare the young Turneps for Hand-houghing, with the more Eaſe and Safety. If the large Sort of Turneps are ſowed forward for to feed Cattle, they ought to be houghed at eighteen Inches a-part; if lattered, at twelve: Yet Allowance ought to be made for the Nature of the Turnep; a ſlender longer Turnep will grow well forward in the Year, at a Foot Diſtance, when ſome of the large round Sort will languiſh, if ſown ſo near. There was a certain Sort of green Round, that grew beſt at only a Foot aſunder any Time, when other Round would be ſick and crippled in their Growth at that Diſtance; but this Breed is loſt from amongſt us, to our great Regret, becauſe it was a very ſweet Sort. Drilled Turneps are eaſier and cheaper houghed, than thoſe ſown in the Random Way. Here a Shilling will go as far as five in the Broad-caſt Sowing; and, in Caſe they happen to ſuffer for Want of early Houghing, the next Houghing, or Moulding up, will recover them; a Remedy that may be applied to the Drill Turneps,

neps, even when their Leaves are six Inches high. In short, where Turneps are drilled, less Seed serves, are a surer Crop, are houghed cheaper, and grow much bigger with less Dressing, than when Turnep-seed is sown in the promiscuous Way. Rolling young Turneps, of late, has been less practised than formerly, for though it is a Remedy against the Fly and Slug, by Closing the Earth, and Crushing many of them to Death; yet the Roller is apt to harden the Ground, and cause the Turneps to grow sick and yellow-leaved, stunted and poor, besides hindering the Hough's Operation, for this will make it much more troublesome to hough. But, for a further Improvement, the Drill-plough may be employed to turn, hough, or plow the Ground, between the Rows of Turneps, which its Socket-share, and two broad Boards, will very well perform with little Trouble, and so loosen the Ground and kill the Weeds, that the Hand-hough will the more easily work up the Mould to the Roots, and about the Turneps: Or, instead of this, the Horse-break may be drawn along the Intervals, and the Hand-hough, after that, is to follow. But more of Houghing Turneps in the next Month.

*The Way of saving a Crop of Turnep-seed.* When this is designed, due Care must be taken, that the Turneps are no Ways bitten by any Cattle, for that may prove an Impediment, though many Turneps have grown after such Damage, when not too much, and bore good Seed; but of transplanting Turneps for Seed, I shall give an Account of it in a proper Month. But to the Matter in Hand. About a Fortnight, or three Weeks before the Seed is full ripe, one or more Men, or Boys, should be employed to keep the Fowls off, for the least small Bird will do a great deal of Hurt here: This is so material a Point, that I have known a

careful Farmer ſave fifteen Buſhels of Seed off one Acre, when his Neighbour that were neglectful, got little more than their Seed again, and this meerly for Want of Guarding it in Time. One Man, with a Gun, will guard two or three Acres well. Turnep-ſeed is ripe about the Beginning of this Month with us, as may be known by the light brown Colour of its Pods. Some reap it with Sickles, as they do Wheat; but the beſt Way of doing it is with ſharp Knives, that, by their keen Edges, cut the Stalks eaſy, without jarring the ripe Pods, as the rough Teeth of the Sickle will be ſure to do; beſides which, a Man by the Knife can cut all the Stalks off a ſingle Turnep clear of Weeds, better than with the other; and thus with a Knife a Man may cut down a Rood a Day. The Cuttings or Rips are to be laid in Rows, and in this Poſture kept ſome Days abroad, to hay and dry; and, as this Seed is very apt to ſhed, ſome bring their Blankets, or Barn Cloth, or Sacks to thraſh it on in the Field. Others, again, will ſpread a Barn Cloth on the Bottom, and about the Sides of a Cart or Waggon, and bring all out of the Field into the Barn, for thraſhing out the Seed directly: Two Acres of Haulm, with its Pods, has filled two Bay of Barning, that ſometimes will yield thirty Buſhels of Seed, and more. An Acre of this Seed has been ſold for above four Pounds; one Buſhel of Turnep-ſeed returns ſometimes two Gallons of Oil, by Expreſſion, for the Wool Buſineſs, or for burning in Lamps.

*The Way of cleaning Turnep-ſeed.* One Man has thraſhed and cleaned four Buſhels of Turnep-ſeed in one Day. When it is thraſhed out, it muſt be paſſed through a Herring-back Chaff-ſeed, which is a round ſplintered Sieve, that riſes in the Middle. Next, it muſt be ſlacked with a Knee-fan; when

when this is done it muſt lie on the Floor about three Days, ſtirring it once or twice a Day; then keep it in a Bin till you want it: But obſerve, that once in ſix Months at leaſt, you ought to ſieve it from the Duſt, which otherways would heat, and perhaps breed Mites or Wevils in it. Thus it will keep ſeveral Years, and by ſome be preferred to new Seed.

*The Benefit of my Receipt for keeping off Crows, Rooks, and other Birds, from damaging the Turnep-ſeed Crop.* Now may be proved the great Value of my Receipt of five Ingredients, inſerted in my laſt Monthly Treatiſe for *May*, which will effectually keep off all Birds from hurting your Crop of Turnep-ſeed, provided you ſet a ſufficient Number of the furniſhed Sticks at a proper Height, and in a right Manner, ſo that the Wind has not Power to blow the Feathers at the End of the Pack-thread about the Sticks, for if they get twiſted they will do no Good. Thus I have given you a larger and more particular Account of this moſt valuable Vegetable, than any Author whatſoever has hitherto done; and which, I hope, will be a Means to increaſe this moſt ſerviceable Plant, where it never was before.

## CHAP. IV.

### *Of Plowing for a Wheat-crop, with ſeveral Caſes relating to this Grain.*

*Plowing for Wheat in the* Chilturn *Country.* In this Month, in ſtiff, loamy, or gravelly Soils, theſe Broad-lands, that were plowed a-croſs off Pea or Oat-ſtubbles, bout up croſs-ways for ſowing Wheat at *Michaelmas*.

*A Second Way.* A Farmer fallowed his Oat-

ſtubble incloſed Field in *April*, and plowed it at that Time into Broad-lands, as it lay in before, and ſo it lay 'till the Middle of this Month; then he harrowed it a-croſs, and about the latter End, as ſoon as he had filled his Thoroughs in, he plowed it croſs the laſt Way into four-thoroughed Stitches, or what may be called two-bout Ridges: Then he immediately harrowed down ſo many of the Ridges, as made Room for a Fold-courſe, and ſo proceeded; and when at any Time he got to the End of one Row, or Land, he harrowed down another Fold-courſe, for the ſame Purpoſe; then before Harveſt, he bouted the Ridges, which is called a ſecond Stirre, and which he likewiſe harrowed down, as often as Room was wanted for the Fold. The next Work was, his Thoroughing the Land down after Harveſt, if it proved fine; but, if rough, he muſt have back-bouted it, and to lie ſo a Week, or Fortnight; then harrow it plain croſs-ways ready for plowing and ſowing Wheat.

*Plowing for Wheat, or Turneps.* Thoſe four-thorough Stitches, or two-bout Lands, that in *November* laſt were plowed and made ſuch, and lay the reſt of the Winter and Spring in this Poſture, and which were plowed again in *April* laſt into Broad-lands, Bouts, or Stitches, for ſowing Turneps, or Wheat, ſhould now be ſtirred again into ſome Shape of Plowing, as you think fit: And it is now that you will find the Benefit of laying your ſtiff Land all the Winter in ſuch Stitches or Ridges, above the common Level of Wets, for the Froſt to have the greater Power on them, and cauſe them all the Summer after to plow ſhort and mellow.

*Plowing as a firſt Stirree for Wheat.* In *April*, a Farmer plowed a Pea-ſtubble into Broad-lands, being a gravelly Loam; in this Month, he harrowed

rowed it plain, filled in the old Thoroughs, and bouted the Ground up. In *July*, he bouted it off the laſt Bout, which is near clean Plowing, and is an excellent quick Way to ſweeten and ſhorten Land: Then after Harveſt he thoroughed it down, and harrowed it croſs the Thoroughs for Plowing and Sowing Wheat in Stitches.

*Wheat mildewed, blighted, or what we, in* Hertfordſhire, *call Struck.* Wheat, in its green Ear, in this Month, is apt by Winds, and heavy Rains, to be beaten down, and ſtruck or mildewed, occaſioned, as ſome imagine, by Fogs, or thick Vapours, that fall in glutinous or honey Dews, which ſo bind up the milky, tender, green Ear, that the Kernel cannot expand itſelf ſufficiently to grow into a plump full Body: That, the thicker the Wheat grows, the more free it is from this Damage, becauſe the Mildew cannot eaſily fall on all the Sides of the Ear and its Stalk, and that, by ſuch thick Standing, the Winds and Wets have leſs Power to make it fall and lodge. Others, with more Reaſon, ſay, the thinner the ſafer; becauſe the Sun can better come at the Bottom-part, to harden and ſtrengthen the Straw: Hence it is, that Wheat, growing in open large Fields, has the leſs Chance of ſuffering by Blights and Mildews; for here the Dews ſeldom fall perpendicular, and, when they do, a Shower of Rain, or Winds, that has here a free Paſſage, often waſhes, blows, and ſhakes it off the Ears. But when the Stalks are fallen, or laid, while the Ear is unripe, the Sap's Aſcent is much hindered and ſtopped, and then is bred a thin, or what we call an Oatmeal Kernel; though ſometimes (but rarely) by the Help of a dry Seaſon afterwards, and contrary Winds, ſuch Stalks may riſe again, and get erected into its firſt fruitful Order. Again, when Wheat falls down in its green Age, there is the more Hazard

of

of its Recovery, than when it falls, and is laid at a greater Maturity. Early ſown Wheat has a Chance to eſcape the Stroke or Mildew, when the latter ſown ſuffers, becauſe, the ſooner it is ſown, the more it enjoys of the long Days, and conſequently of the Sun's Aid, to give it a forward Ripeneſs, for, the harder the Ear and Straw, the leſs Power the Dews have to make a Lodgment on them. It is on this Account, that Mowing and Feeding down Wheat in the Spring-time, to ſuſtain Sheep, or to ſtop its too great Luxuriancy, backwards its Ripening, and expoſes it to the Riſque of the longer Nights. Wheat, that grows in looſe, chalky, or ſandy Land, is very apt to fall down, and ſo is that which is harrowed in on a Layer of Clover, or other artificial Graſs, or after a Barley-crop, for Want of that due Aſſiſtance at its Roots, that a ſtiff Earth, in a due Quantity, would give it; when it ſo happens, the Mildews, as I ſaid, have great Power to make their Lodgment, and damage the Crop; for this Reaſon it is, that the Drill-huſbandry gets more and more into Practice, to give the Roots a ſufficient Covering and Nouriſhment of Earth by the houghing Inſtruments, which they will perform at Pleaſure, and keep up the Stalks from Falling, when that Wheat ſown in the promiſcuous Way is laid. Mildews, Lightning, and other Cauſes, ſhew their blighting ſulphureous Qualities, by the hoary Colour, and dark Spots, they leave in the Straw; ſo the Green-fly, and other Inſects, which feed on the Kernels and Stalks of the Wheat, diſcover their pernicious Labours, by wounding the Stems, ſucking the Sap, and eating little Holes in the Corns, as they very much did in the Year 1740, the latter Part of that dry Summer. To theſe Caſualties, the ſmall incloſed Field is moſt expoſed, and ſo is the Corn that grows under

der Hills, or near Rivers, insomuch that I have known some Places to be never free, little, or more, from this Misfortune; because here the Fogs and Vapours rise most, and the Winds being broke by the high Position of the adjacent Land, or by Hedges, or Trees, and the Sun's Rays much kept out, the Honey-dews and Rains fall directly down, and do Harm. But happy it is, that, in dry Summers, we are not so subject to Mildews, as in hot wet ones. Now one Way to avoid this blighting Misfortune, is, to sow the red-pirky Wheat, or the white-pirky Wheat, for these, by the close Make of their Ears, do not so readily receive a Blight as the three *Lammas* Sorts will, as I and many more yearly experience. Though, I must own, that no Sort escapes this Evil so well as the blue or grey-ball, or Cone-bearded, Wheats, which grow in a Fence against it, and accordingly are valued and sown in great Quantities about *Bridgwater*, *Taunton*, and many other Places in *England*. As Remedies, in some Degree, against these Disasters, I here propose, the dressing Ground with Lime, Chalk, Soot, Ashes, Oil, Cake-powder, Malt-dust, Horn-shavings, or any other dry Manure, to be of considerable Service; and so would be a long Rope drawn by two Men along the Wheat-ears after a foggy Morning, when the Mildews have been perceived to fall, in Order to brush them off, while they are in an aqueous Condition; therefore, in our *Chiltern* inclosed Country, few sow the *Lammas* Wheat alone, because of its long loose Ear, in which the Kernels grow at such a Distance, as to give great Room, for these Honey-dews to lodge (as I said before) and to become also thus liable to be sooner hurt by other blighting Causes, than the close-eared Sorts: And it is for this, and several other Considerations, that I shall give an Account of hereafter,

ter, that we refuſe with us to ſow any other than the Pirks alone in moſt of our Fields, and in ſome Pirks and *Lammas* mixed, becauſe the Pirks, in ſome Meaſure, we think, defend the *Lammas* from Strokes and Blights, and for grinding beſt together. For my Part, I ſow theſe Wheats every Year, and ſome, of late, ſow the Pirks in Vale Lands where they uſed to ſow the *Lammas* Sort, for theſe Reaſons, and for the Sake of its greater Yield. If therefore any Gentleman, or Farmer, thinks fit, I will furniſh them to any Parts, with the largeſt white *Lammas*, and white hoary-eared Pirks: The true *Aylesbury* red Pirks, and the fine Egg-ſhell Wheat for Sowing, againſt the next Seed-time, for now Land-carriage is at the cheapeſt Rate. If their Soil is a Chalk, Gravel, or of a ſandy, or other dry Nature, they may have their Seed off a ſtiffiſh Earth, and ſo the Contrary; and, for their greater Improvement, I ſow and ſell the largeſt Sort of Wheat-ſeed, which, in good Ground, will certainly produce the moſt Profit, as in the Month of *Auguſt*, or *September*, I ſhall plainly make appear; and it was on theſe Accounts, that I ſent thirty-four Buſhels at one Time, of three Sorts of Seed-wheat, above ſixty Miles an End, by a common Road Waggon, into *Darbyſhire* about *Michaelmas* 1741, to a Gentleman who furniſhes it in Parcels to ſeveral of his Tenants about him, to provoke them to vie, who will obtain the beſt Crop; and who by this, and other ingenious Contrivances, has enriched his Tenants, and improved to a conſiderable Degree his own Eſtate. And whoever thinks fit to ſend to me for Seed-wheats, Rath-ripe, Barley, tick Horſe-beans for Splitting, Rouncival, Field Peaſe, Winter Thetches, any Sort of Turnep-ſeed, the Kerroon, *May*, Duke, or other improved Cherries, Apples, Pears, and other Fruit Trees, *&c.* Or Seeds or Sets of

Beech-

Beech-trees, White-wood Sets, White-thorn Sets, Sallow Sets, *&c.* may depend upon fair Uſage. But to return to my Subject: All chalky Soils, ſandy Grounds, and other looſe Earths, the moſt of all others ſubject Wheat to the Stroke, becauſe, in ſuch ſhort ſlack Grounds, the Wheat, by a little Wind, is apt to bend down and receive the Mildews; which ſpoils the Straw for Hat Work, and cauſes a lean Kernel. In the Summer, 1737, ſeveral of my Neighbours had their latter-ſown Wheat ſtruck, though a dry Time, for ſome were ſo bold as to ſow it after a Turnep-crop the twenty-fifth of *April*. A blue Miſt, between Kerning-time and Harveſt, is that which hurts the Wheat, becauſe, when this happens, and no ſtrong Wind, or great Rain, ſucceeds quickly after, the Fog or Dew glues up the Ear, and ſpoils the Crop. Two Fields, lying on the Hanging of a Hill under the North and Eaſt Winds, produce ſmutty Wheat, dreſs the Ground (which is clayey and hurlucky Chalk) with what you will. Another twelve-acre incloſed Field joining them, at *Dagnal* in *Bedfordſhire* near me, has the Wheat that grows in its gravelly, loamy, flat Bottom; always every Year, ſtruck little or more. But of Blights, See Mr. *Tull*'s Book, who has largely wrote on this Subject.

*Wheat blown down.* In this Month 1733, a great deal of Wheat was blown down. One Farmer in particular had a Rake, made with long wooden Teeth, and with it pulled it all one Way, that before lay ſcraled and confuſed; and this he did by going along the Thoroughs, and raking two-two-bout Stitches at a Time, by which it lay regular, and grew better, and ſecurer againſt the Damage of Wets and Mildews. If it falls before its full eared, it has the greater Chance to riſe.

By thus raking the Wheat in a regular Form, it lay more convenient for the Reapers.

*Wheat bitten.* Now may be ſeen the ill Effects of Sheep's biting Wheat on the Spindle, as ſometimes they do by breaking through Hedges; for now ſuch Wheat will diſcover itſelf in a poor dwindling Crop, for Want of that Nouriſhment, or Sap, that it loſt on the Bite. Alſo, about the Beginning of this Month, 1739, Wheat appeared between Hope and Deſpair, by the long, cold, and wet preceding Spring: And, as it continued ſuch Sort of Weather ſome Time afterwards, it raiſed the Price of it, the following Year. Wheat begins to ſpindle about the firſt of *April*, and then has one Knot juſt above Ground, afterwards another, and ſome three in all, but ſeldom four.

*Remarkable Sayings relating to Wheat.* When the Wheat-ſtalk is well jointed, and is thick and ſtrong, it is a Sign of a good Ear. — A ſmall Ear, and large Grain; for, the ſmaller the Ear, the larger the Wheat, Rye, or Barley. — A good Cherry-year a good Wheat-year. — About two Months after the Shooting of the Wheat-ear, Harveſt commonly begins.

*A dry* March, *a wet* April, *a dry* May, *and a wet* June,
*Is commonly ſaid to bring all Things in Tune.*

When black Ears appear off Wheat, it is a Sign of a good Corn-year. — Wheat ſhews itſelf beſt in Blade, for, when it comes to ſhoot, it looks thin.— A wet Seaſon, in Blooming-time, breeds and brings the Green Fly, that ſucks the Bloom, and cauſes the Ear to miſs Kerning; but dry Weather and a briſk Wind keep the Fly off, that they cannot ſettle. But dry Weather and a calm

Time

Time ſuit the Bloom beſt, and cauſe a plentiful Crop of Wheat.

*Blooming Wheat.* In 1739, a forward ſown Crop of Wheat had done blooming by *Midſummer*, having begun about a Fortnight, or three Weeks, before. A little Wet does it Good, but a great deal damages. In this wet, cold Summer, the Wheat ſuffered, about this Time, a Week or more ſmall Froſts, that cauſed many Ears to miſs in their Kernels. It was this ſevere Seaſon, that tried the Strength of moſt Grounds, for thoſe that were poorly dreſſed, had poor Crops; and, as it happened this Summer contrary to moſt others, the latter ſown Wheat fared beſt, as to its Blooming, becauſe the forward ſown met with a very cold, long, wet Seaſon, which ſtopped ſome, and waſhed off the Bloom of other Wheat-ears, ſo that Thouſands of Acres of this Grain were furniſhed with only poor, thin, light Kernels; but, drier Weather ſucceeding, the latter ſown had ſuch a good blooming, or kerning Seaſon, that it produced a full Kernel in a full Ear. However, the greateſt Security of all others againſt this fatal Miſchief is by ſowing Wheat early; for then the green Ears commonly meet with the drieſt and warmeſt Weather, and conſequently the beſt blooming Time; and thus cauſes both the Ear and Straw to acquire ſuch a Hardneſs betimes, while the ſhorteſt Nights laſt, that neither the Dews nor Inſects can ſo eaſily hurt them. In this and next Month, Wheat is moſt liable to theſe Misfortunes.——Dry Summers hurt not *England*, according to the old Verſe:

*When the Clay doth feed the Sand,*
*Then merry it is with Old* England;
*But when the Sand doth feed the Clay,*
*Then cries* England, *Well-a-day!*

That is, It is better by far, that the Vales feed the hilly Country, than that the Vales. But there is Room for Exception, as to the Dryneſs of Years, for the Winter, 1739, and Spring, 1740, were dry, and ſo ſeverely cold, that they periſhed a great deal of Wheat, ſo as to cauſe it to be ſold for eight Shillings a Buſhel, in *May*, 1740; and this it did both in the Vales, and in the *Chilturn* Countries; for, as I remember, the Froſts began about *Chriſtmas*-day, and laſted a long Time, attended with moſt ſharp Winds from the North and Eaſt, that killed many of the Wheat-roots, but moſt of all thoſe which lay high in Ridge-lands: Yet that Wheat, which ſtood it, enjoyed ſuch a fine, dry Blooming-time, that none, I believe, was ever known to yield better.

*The Green Fly on Wheat.* In this Month, 1735, it was ſo wet, and now and then hot and dry, as to cauſe the ſmall Green Fly's Coming, that I ſaw about the twenty-third Day, ply in and round the Wheat-ear, where it got among the young Kernels, which, about this Time, were under Blooming, and about half kerned; here they fed on the Bloom of the ſame, and the growing Corn of others, to its great Damage. Much green Wheat was alſo blown down with the Help of heavy Rains, which cauſed it never to riſe again. The latter ſowed eſcaped beſt this Summer.

*The ſudden Growth of Wheat.* In this wet Month, 1735, a Perſon ſtuck up a Stick among ſome green Wheat, and found it to grow ſeveral Inches high in one Week, at Shooting-time.

*A Wheat-crop ſpoiled by late Feeding.* A Farmer, whoſe Land joined mine, intending to make the moſt of his Wheat-crop, fed it down early in the Spring, and, after it had got a new Head, fed it a ſecond Time bare with his Sheep; but the Conſequence

ſequence was fatal; for the Horſe-gold and black Bennet Weeds came up ſo thick, as got the Start of the Wheat; and at this Time, indeed, the Field appeared green, but with more Weeds than Corn, to the almoſt Deſtruction of the Crop.

*The Loſs of a Field by Want of a good Tilth.* It was in this Month, 1734, that a ten-acre incloſed Field afforded a diſmal Sight, being thought to contain no more Wheat, than would grow on one Rood, or half an Acre, of Land well planted. The Reaſon was allowed to be, that this Farmer gave the Ground, which was a Clay mixed with Gravel, only one Plowing in *April*, and another in *September*; in which Space of Time, the Knot, or Couch-graſs, and other Weeds had ſo taken it, that the Soil got very foul and ſour. Notwithſtanding this, our bad Huſbandman plowed in his Wheat-ſeed in four-thorough Stitches, or two-bout Lands, that had been well dreſſed all the Summer before with the Fold, and in the Spring following with Soot; but all was near loſt for Want of plowing the Land oftener, as was apparent by the Seed's being bound in, and not able to put its Blade through ſuch tenacious Glebe; which ſhews the Excellency of the Plough's Uſe, whoſe Buſineſs it is to reduce ſuch ſurly Soils into a powder'd State, and make them give Room to their fixed Salts to act and nouriſh the Vegetables: And ſo great is the Power of this Inſtrument, in this Reſpect, that a Piece of Ground, well plowed at ſeveral Times, and got thereby into a fine Tilth, ſhall, without any other Help, bring forward a much better Crop of Wheat, than a half-plowed ſour Tilth double dreſſed, whereof this very Example is a ſufficient Proof, beſides too many others, that every Seaſon affords; and that, becauſe the clotty Ground can neither receive, nor emit, the Salts of the Manure ſo free as the looſer Earth.

Earth. It is from hence, as from a Fountain of Riches, that the Skill and Induſtry of the Farmer is employed to furniſh the noble Matter to his Corn; of which Volumes might be writ by a learned Pen, for all Things contain little or more of this Principle, and in it all Things center. And now, as I am on this loſing Subject, I will ſet down a Sort of Eſtimate of the Loſs, *viz.*

| | *l.* | *s.* | *d.* |
|---|---|---|---|
| The Rent of Ten Acres of Land, at 10 *s.* each, for two Years — | 10 | 00 | 00 |
| Plowing twice, and Harrowing once | 05 | 05 | 00 |
| Dreſſing by the Fold, and with Soot, 40 *s.* an Acre —— —— | 20 | 00 | 00 |
| Seed, two Buſhels and an half to an Acre, at 40 *s.* a Buſhel —— | 05 | 00 | 00 |
| Tythe and Taxes, if the firſt is paid in Money and aſcertain'd —— | 01 | 05 | 00 |
| | 41 | 10 | 00 |
| Deduct for ½ Acre of Wheat 10 Buſh. | 02 | 00 | 00 |
| Loſs | 39 | 10 | 00 |

Perhaps you will wonder, why I charge the Loſs of two Years Rent; the Reaſon is, becauſe, on this Account, we take in the third, or fallow Year, to make a Computation, for that the Field produces nothing in that Time, but lies Part of a Winter, and a whole Summer under the Preparation of the Plough and Harrow, for ſowing Wheat about *Michaelmas*; and, as for the ſecond Year, that the Field has a Crop of Lent-Grain growing in it, we reckon it only pays that Year's Rent, and ſome contingent Charges, ſo that the third, or fallow Year, ſhould be paid by the Wheat-crop.

*A good*

*A good Crop of Wheat got by ſowing on a Barley-ſtubble.* About the Beginning of this Month, 1736, the Curlock's yellow Head was in full Bloom, which is a Weed that very much infeſts Lent-Grain in general, and leaſt of all Wheat, becauſe, for this, the Ground is commonly plowed ſeveral Times, and the Seed ſown early at the Edge of Winter, whereby it grows up betimes in the Spring, and often keeps Maſter of the Place, if the Ground was well manured. The Caſe was thus: I had, off the ſame Land, a good Crop of Barley, in 1735, and, the Soil being a flat, loamy Gravel, I was reſolved to ſow the ſame with Wheat in *October* following; to this Purpoſe, as ſoon as the Barley-crop was got off, I plowed the Field with the fallow Wheel-plough, by hacking it the ſame Way the Broad-lands lay in before; then I harrowed it plain, after it had been plowed about a Fortnight, when I dunged it all over, plowed again, and ſowed the Wheat in two-bout Lands in *October*, and it produced a good Crop. This is the quickeſt Way that is, for reducing a Barley-ſtubble into a fine Tilth, in ſuch a ſhort Soil, for Sowing Wheat, that grew free of the Curlock, though the Barley-crop was full of it.

French *Wheat.* If you have not ſown your *French* Wheat in laſt Month, do it the Beginning of this at fartheſt, according to the Method I have ſhewn in *May*.

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## CHAP. V.

### *Several Caſes, relating to Beans, Peaſe, Thetches, Barley, &c.*

A *Bean-crop damaged in the* Chilturn. Now might be ſeen the ill Effects of the Want of good Plowing, in many Fields, by the Appearance of

of Weeds, and thin Crops of Grain. A Field of my Neighbour's, that was a good Loam, flatly situated on a Hill, having been Wheat last Year, that grew in two-bout Lands; in *March* following, a Mixture of Horse-beans and Hog-pease was sown in two-bout Lands, on only one Plowing, and they throve extremely well, 'till about the first of this Month, when the Horse-gold Weed, or, as some call it, the yellow Creese came up very thick amongst them presently after a plentiful Shower of Rain, which fell after six Weeks Drought before, and brought up this destructive Weed, for Want of two Plowings instead of one, which would have made the Ground fine and sweet, and caused the Grain to shoot up so fast, as to have out-ran, got Master, and crippled the Weed; but, as it happened, the Beans and Pease were a very poor Crop.

*The Benefit of Sheep to a Crop of Beans in Vales.* You Vale-farmers, that sow Horse-beans in the random or broad-cast Way, and plow 'em in on Ridge-lands, turn your Fold-sheep among them in this Month, that they may break the Threads or Vines, or Binds, as some call them, of the pernicious Hale, or Hell-weed, which, in some Years, would otherwise ruin your Crop, for there is no other Method at this Time, than this, to cure this Misfortune; for these serviceable Animals are so fond of Weeds at this Time of Year, for the Sake of their Sweetness and Variety, that they will refuse hurting the Bean, or even its Blossom; and therefore some let them go amongst them, 'till they begin to kid. If any of these Farmers be asked the Question, if the Sheep do not rub off the Blossoms, in the random-sown Beans, by going at this Time among them, their Answer is, —— *We had rather lose some Blossoms, than most of our Crop by Weeds.* —— For though, on these Vale-lands,

Beans

Beans are sown promiscuously, yet, as they are plowed in under Furrows, most of them come up in Clefts, or Partings of each Furrow, in a Sort of Row, at near a Foot asunder, that give the Sheep a narrow Space to go between; and it is here they will bite and kill the wild Oat, and destroy other Weeds by their Tread and Rub. In the dry Summer, 1736, Field-beans were in full Bloom, the first of this Month. But hereafter I shall give you an Account of a new invented Plough, that sows Beans in these Vale-lands, by which all Weeds may be easily destroyed, and the Fly kept off by their being sown in Drills.

*A sure Way to preserve Thousands of Acres of Field Horse-beans from the Damage of Flies, or Bugs, after they have begun it.* When Field Horse-beans are just turned out of Blossom into Kids, in some very hot Summers, the Dolphin-fly, or black Bug, take the Bean-stalk, and always begin their Rapine at the Top of the Stalk, from whence they eat downwards. In this Case it was, that a Farmer with his Scythe-men mowed off the Tops of four Rows of Beans at one Cut, as they grew in Drills, about twenty Inches asunder, and sowed out of the Hopper of the three-wheel Drill-plough; and in this Manner they proceeded, 'till the whole Field was done, which proved such a sure Cure, that the Owner had a vast Crop, when his next Neighbours were devoured by this terrible, quick-breeding Insect; for, when once they are fallen to the Ground, they can never more rise again, as I have in last Month likewise wrote of, and here repeated, for the greater Notice of my Readers.

*An improved Pea-crop.* In this Month, after a Crop of Turnep-seed was got off the Ground, it was immediately plowed up, and a Mixture of white and bright brown coloured Pease were harrowed in the same Land, which lay in a warm

Bottom: They were of the hot-ſpur Kind, and commonly fit to get into the Barn in twelve or thirteen Weeks Time, though ſown promiſcuouſly out of the Hand.

*Blue Peaſe, a good Crop.* The latter End of this Month, in 1736, the blue Pea, that was ſown broad-caſt, in our incloſed Fields, in *April*, was ready to bloom, and made a fine Shew in many Places, by their large Growth, though there had been no Rain for near two Months before; for this Sort thrive beſt in dryiſh, hot Seaſons, if the Ground was moiſt, and in a fine Tilth, when they were ſown; but better in Drills, than in the Random-way: This dry Summer, the common Hog-pea was in full Bloom about the twenty-fifth Day.

*Thetches, their great Service, in this Month.* In this Month, thoſe Thetches, that appear ſpeckled or begin to bloſſom, may be daily mowed, and given in Racks, as we do green Clover, *&c.* to Horſes in the Stable, for ſoiling them; and, as they are of a very healthful Nature, they cool their Heels, keep their Bodies open in hot Weather, and ſuddenly fat them. Thus ſuch a Crop has laſted three Weeks Cutting, before they are too ripe, and the Sap or Goodneſs out of the Stalk: Or Horſes may feed on them in the open Field, but then they muſt be managed accordingly; that is to ſay, they muſt not range all over them at their Pleaſure, for then they will trample and ſpoil almoſt as much as they eat; but they muſt be either parted with Hurdles, that they may be confined to ſo much Ground only, as you think fit; or each Horſe may be ſtaked by a Chain or Baſs-rope to the Foot, and ſhifted to a freſh Bite, every Day, as they do in the Vale open Fields, in particular; though their Getting looſe is hazardous, and ſometimes attended with great Damage, if but one

one of them, by a Servant's Careleſneſs in not driving down the Stake deep enough, or otherways, frees himſelf, and runs among the Grain. Thetches, fed or mowed green, are a great Improvement to the Earth, for, *Firſt*, they employ the fallow Ground. *Secondly*, the great Cover of the ſpreading Thetches keeps in the Spirit of the Land, and thereby very much enriches it. *Thirdly*, The Horſes dreſs it with their Stale and Dung. *Fourthly*, They kill Weeds, and ſo hollow the Ground, that, on one, two, or three Plowings, Wheat may be ſown, as uſual, in *October* following. Thetches are alſo good to mow and feed Cows in Racks; for, as they are a green Food, they will breed Abundance of Milk, while the Beaſts are freed under Cover from the Torment of Flies, and the ſcorching Heats of the Sun; and, to enjoy this great Benefit the longeſt Time, Thetches ſhould be ſown in *January*, *February*, and *March*, or longer, that their alternate Growths may ſeaſonably furniſh the Farmer, both in Vale and *Chilturn* Lands, with a ſufficient Quantity of green Meat, when no other Sort is to be had; and this not only for Horſes and Cows, but alſo for Sheep, and eſpecially thoſe Ewes that ſuckle Houſe-lambs. Then, and in this Manner, green Thetches may be mown all *June*, *July*, and *Auguſt*, and be either given under Cover, or fed in the Field, to very great Advantage.

*The ill Conſequence of ſowing Barley dry and late.* In this Month, in the dry Summer of 1736, might be ſeen the Want of that excellent Method, I have already made known, for ſteeping Barley-ſeed in the moſt fertile Liquor in the World. This Year, no Rain fell in *May*, nor *June*, which cauſed a great Deal of Barley to lie backwards, and ſtunt in its Growth, when that Barley-ſeed, that was infuſed, grew and ran up into a high and

flouriſhing Stalk, of a dark green Colour; and that becauſe the Barley-corns carried ſuch a Quantity of nitrous Moiſture into the Earth, with them, as made them ſtand in no great Need of Rain, for two Months afterwards; and yet, if it had happened that great and long Rains had fallen, this vaſt Improver ſtill maintains its beneficial Qualities, even to the Time of Mowing. In this Month, a great Deal of Barley ſhot well, that was ſown forward, the latter End of *February*, or in *March*; but that, which was ſown in *April*, and the Beginning of *May*, could not ſhoot into Ear at all, by Reaſon of the long Continuance of dry Weather. Now might be ſeen a Proſpect of ſeven Quarters of Barley on one Acre, where the Seed had been ſteeped; and a two-quarter Crop, where it had been ſown dry, though both were ſown at the ſame Time. This Loſs was Matter of Fact, as was experienced by ſome Thouſands, and moſt of all in the ſandy Lands of *Suffolk* and *Norfolk*, and elſewhere, in this ſcorching Summer of 1736. About the Year 1730, it was likewiſe ſo dry a Year, that Barley, ſown in the common Way, and even in a right Seaſon, lay as naked in the Ground at *Midſummer*, as it was when juſt ſown, which occaſioned the Crop at Harveſt to be of three Sorts; that Seed, which lay deepeſt in the Ground, was then ripe; the next half ripe, and the uppermoſt greeniſh. This was the Condition of moſt Barley-crops that Year; and, as for the Malt and Drink made of ſuch Grain, it wants no Character here. Near *Beccles* in *Suffolk*, a Gentleman told me, he had ſuch a large Crop of Barley in his dry, ſandy Ground there, the Summer 1736, as ſurpriſed the Country about him, when his Neighbours, the ſame Year, had moſt of them only four Buſhels, or a Comb, as they there call it, on one Acre; and this, becauſe he ſowed his Seed wet,

wet, according to my publick Receipt in *April*, when others ſown theirs dry; yet, about twenty Miles further, I met with a Farmer who occupied a ſandy Soil, and who bought my Book with the Steeping Receipt in it, that ſaid he never made Uſe of it, becauſe he thought it too troubleſome. Indeed, if, for this Reaſon, a Gentleman's Servant had perſuaded his Maſter againſt it, I ſhould not have wondered; but for a Farmer, who had Land enough to make a conſiderable Advantage by it, and his Rent to pay, I think inexcuſable. But, as I have ſince diſcovered, and experienced it in my own Land, a moſt cheap Ingredient, that ſupplies the chargeable Nitre, and that coſts no more than Six-pence Steeping for only an Acre; will effectually keep off the Worm, make Barley branch and flouriſh in the drieſt Seaſons, in the drieſt Grounds, even if it is ſown ſo late as the Beginning of *May*; I hope, in Time it will come into general Uſe, both in Vale and *Chilturn*, and which I intend to publiſh in a proper Month.

*Alſo the ill Conſequence of ſowing Barley in a rough Tilth.* Without a fine Tilth, there cannot be a good Crop of Barley. About the Beginning of this Month, 1740, the Difference of Barley-crops might be eaſily perceived; that, which was ſown on a fine Tilth, well manured, flouriſhed by getting a thick Cover to his Roots betimes, and that ſo ſtrong, as to withſtand the North and Eaſterly Winds, which were the chiefeſt that blew this cold, dry Spring, 'till about Mid-*May*; for this Grain is ſo diſagreeable to hard, rough Ground, that it will pine, and ſometimes grow yellow or reddiſh in it. It is on this Account, that Barley will not endure to be ſown on new broken up Ground on only one Plowing, or Turning of the Sward or Turf, becauſe it has a much tenderer Root, than either Wheat or Oats.

*A further*

*A further Account of the great Profit by feeding green Thetches in the Field.* Beſides ſowing Thetches to be fed green by my Horſes and Cows, I likewiſe enjoy their Benefit by letting my folding Sheep eat them in the Field, thus; I hurdle a ſmall Parcel out, and, after my Sheep have fed on the Common 'till about two or three a Clock in the Afternoon, I have them brought into the Field, and bait them on theſe Thetches, which fills their Bellies, keeps them in Health, and half fats them; therefore I fold them in the ſame Field every Night, for Dreſſing the fallow Ground, and thus prepare it for the Reception of Wheat-ſeed at *Michaelmas* following, to the Saving a great Expence, that I muſt be otherways at, in buying of Manure to ſupply the ſame.

*The great Benefit of ſowing large Seeds.* This Article is of ſuch great Importance, that a very nice Regard out to be had to it, becauſe of the ill Conſequences attending the Sowing of ſmall underling Seeds of any Kind.

1*ſt*, It often happens, that a Wheat-crop is laid, or fallen down, before Harveſt, by Means of Exceſs of Dreſſing, or by heavy and frequent Rains, or by Storms of large Hail Stones; then it ſometimes is, that moſt or all the Crop yields a thin, light Kernel.

2*dly*, Such thin, light or what we call *Oatmeal)* Kernels, being ſown as Seed, are thoſe that very often produce ſmutty or Pepper Wheat, by Reaſon the Body of ſuch a Kernel has not Flower, nor Spirit enough in it to bring forth a full, large Kernel and Ear to Perfection.

3*dly*, Such underling Seed, for Want of Strength, is uncapable of maintaining a long Straw or Stalk, and large Ear, and therefore moſt liable to be blown or beat down by the Force of Winds, and frequent heavy Rains; nor can it, ſometimes, ſo potently

potently reſiſt the Growth of Weeds, as to get the Dominion over them.

4*thly*, There is not above half a Crop of Wheat, Barley, Oats, Peaſe, or Beans, yielded from ſuch poor, thin Seed, in ſome croſs Seaſons of the Year.

5*thly*, Such poor, thin Grain commonly fetches leſs, by one Shilling a Buſhel, at Market, than the bolder and plumper Kernel.

This therefore, is to advertiſe and give Notice, that I ſow and ſell the largeſt of Wheat-ſeed, Barley, Oats, Peaſe, and Horſe-bean Seed; which, by a particular Management, I every Year obtain, and am ready to furniſh any Perſon with it, to any Part of *Great-Britain* or *Ireland*, for ready Money; and I anſwer Letters, provided Poſtage be paid to my Houſe.

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## CHAP. VI.

## *Of* WEEDS.

HAIL, *or Hell-weed.* It is moſtly a Vale-weed, but, in ſome Grounds of the *Chilturn*, we find, it will grow and run among the Horſe-beans at particular Seaſons, as ſome ſay; but I deny the Breed of this Weed any other Way than its Seed, which is often propagated by Means of the Hill-farmer's buying his Seed in the Vale, for the Sake of Improvement by Change; for amongſt the Beans comes ſome of this Hail-ſeed, which will over-run many Acres in a little Time, without perceiving any Root it has, but will twiſt about the Bean-ſtalk like a Cord, and cripple the Crop: It comes a little before the Bloſſom, and cannot be remedied by any Contrivance, ſo well as by Sheep's feeding among them on Weeds and Graſs; for, by this, their Bodies will preſs and break the Strings

Strings of this thready Enemy, and for this Reaſon it is, that the Vale-men let them be here 'till after they bloſſom. This Hail-weed has a Root at firſt, but as ſoon as it fixes itſelf to a Bean-ſtalk, it quits its Root, and is fed by the Bean-ſtalks, to which it will faſten, and run from one to another, a Furlong or more. The Want of this Knowledge puzzles moſt Farmers, ſo that they cannot Account for its Running, as not being able to find its Root.

*The Bennet-weed.* The black Bennet is worſe than the white Bennet; but both are ſo pernicious to Crops of Grain, Wheat eſpecially, that, when they are very numerous, the Ground poor in Heart, and the Summer proves cold and wet, the Bennet oftentimes ſpoils more than half; and for which there is no Remedy, 'till the Ground is cured, by frequent Plowings and ſweet Manures for another Crop. The black Bennet, in ſuch a Soil and Seaſon, keeps Company with the Height of the Wheat to this Time, and generally to near the Time of Reaping; but the chief Occaſion is by ſour, rough Tilths. To this I muſt take Notice of the too common, unhappy Circumſtance, attending this and other Weeds, that cannot be taken out from amongſt the Corn; and that is, their unavoidable Shedding their Seed, and Laying a Foundation for a greater Swarm of them afterwards. This is one Misfortune, I ſhould think, is enough to ſhew the excellent Uſe of the Drilling Huſbandry, which gives the Farmer an Opportunity of deſtroying and preventing the Growth of all Manner of Weeds, beyond any other Invention whatſoever.

*Curlock, or Charlock.* On the twelfth Day of this Month, 1738, I ſaw a Field of Barley overrun with the white Sort, that is allowed to be more pernicious than the yellow Curlock: It grew in a

ſandy

ſandy Loam, near *Darking* in *Surry*, ſo thick, that the Farmer deſpaired, and therefore did not attempt to weed it out. In our Weſtern Parts of *Hertfordſhire*, as we have hardly any of the ſandy Soil, we are not troubled with the white, but abundantly with the yellow. Now, as both the white and the yellow, as well as moſt other Seeds of Weeds, are ripe before the Corn, you may the latter End of this Month, ſee them near ripe by their Pods, that contain a Seed much like that of Turneps: Here then muſt be a fine Parcel of it ſhed againſt another Seaſon, and ſo on, 'till it either coſts the Farmer, perhaps, five or ten Shillings an Acre Weeding, every Time the Field is Corn, and, at the ſame Time, as much more Damage may be done to his Grain by the Feet and Cloaths of the Weeders; or elſe he muſt ſuffer his Crops, very likely, to be eat almoſt up by the Curlock. But what is worſt of all, this Weed defies all Care and Pains totally to deſtroy it in our common ſown Corn, ſo that the Farmer can only content himſelf with pulling ſome of it up by the Hands in its Youth, and giving it to Sheep; or let the Poor, in laſt Month, get it for a boiling Herb; or it may be mown with a Scythe, that will, if it is higher than the Corn, cut its Head off, and ſo prevent its Seeding; or, when it is in Flower, ſome ſtrike off the Heads with a long Stick or Wand; or by drawing them when in Pod, after they have done drawing out the Goodneſs of the Ground in their green Growth. In Oats, Peaſe, Beans, and Thetches, Weeding of this Weed, may be performed with a great deal leſs Prejudice, than in Wheat and Barley, where it commonly is attended with conſiderable Damage: However, when the Curlock is pulled up in its ripe Pods, the Seed will ſell for two Shillings a Buſhel, and yield, by Heat and Expreſſion, about half the

Quantity of Oil, that Rape or Cole-ſeed will, as I ſhall more particularly write of in next Month. Here alſo the Drill-plough and Horſe-breaks extremely well anſwer, by curing and preventing the Increaſe of this horrid Weed.

*Docks.* If it is a wet Seaſon in this Month, and you have not done it in laſt, you may, with the Hand, by a gentle leiſure Haul, pull up, with all their Roots, the red or white long Dock, beſt, among Oats, Peaſe, Beans, and Thetches, which I take to be the beſt Way of all others; becauſe, if the Earth is thoroughly ſoaked, it may be looſe enough to get up the very laſt, fine, ſtringy Part of this Root: Or at the firſt Stirre, which is often done in this Month, they may be gathered after the Plough and Harrows; a Work that by no Means ſhould be neglected, becauſe this Weed is one of the hardieſt and greateſt of Increaſers, both by its Seed and broken Bits; for, if any of them are left but on the Surface, they will ſtrike Root and grow, to the impoveriſhing of the Ground, and Crippling of the Crop of Grain; therefore neglect this Work no longer than in this Month, for now the Dock is making its green ſeedy Head: Which, indeed, ought to be pulled up, whether the Seaſon be wet or dry; but, in Wheat or Barley, it is better let alone by the Hands, and only cut by the Weed-hook, at the very Beginning of this Month, if it be only to ſtop the Dock's Seeding. Some employ an Inſtrument to raiſe this Weed out of the Ground in Fallow-ſeaſon, made with three Irons, that in a Sort of triangular Manner enters the Earth, and, with the Help of the Foot, forces up the Dock from Top to Bottom.

*Poppy or Red-weed.* Pull up the green Poppy before, or when it is in its blooming red Head, or it blooms the latter End of this Month. This will

will be a double Service. First, by clearing the Ground of this very succulent Plant or Weed, which draws much, and hurts the Grain; next, by feeding the Hog and tame Rabbit with it. A Sow will eat it well, and receive such an Increase of Milk by it, as to be able to bring up a Litter of sucking Pigs for the Market, with a little other Help. The tame Rabbit will also thrive and nourish her Young very fast, if given to her fresh every Day; accordingly some make it into Hay when it is in its green Age, for feeding and fattening this Sort of Creatures, who greatly love it, and who will quickly get fat by it, with the Help of some other proper alternate Foods.

*Horse-gold, or yellow Creese.* On the fourth of *June*, 1735, Thunder-showers fell most Part of this Day, and caused the Wheat, that was then on its Shooting, to receive such Assistance, as made it to get the Ascendant of this Weed, which is too numerous, and its Stalks too small to be destroyed by pulling up with the Hands, or by any Instrument; however, it crippled a great Deal of the Wheat so much before, that it never recovered it. Here the Drill-Work prevents this fatal Weed to Admiration.

*Briars, and Old-man's Beard.* In this Month, be sure to cut the Briars at the Bottom out of your Hedges, and likewise, what we in *Hertfordshire* call the *Old-man's Beard.* They both rob the Ground much, and choke the Quick to a great Degree; the latter, especially, will destroy a large Hedge in Time, and therefore, by wounding their biggest Parts at this Time of Year, it will cause the Sap to run out; and, by repeating this Piece of good Husbandry yearly, you may depend on their Destruction, do it by the long Weed-hook, or otherways.

*Wild Oats, how they were killed by ſeveral Farmers.* It has been the Study of ſeveral, beſides what I have ſaid in laſt Month, to account for the Breed of the wild Oat, which in this Month, in many Crops of Grain, appears higher than the natural Oat, Wheat, Barley, *&c.* and eſpecially amongſt that Corn which was ſown on a Lay, as when Ground has been natural Graſs, ſome Years together before, as I have, to my Coſt, experienced. Now how they are bred at firſt, I don't pretend to ſay, more than what I have done, and has been already writ by Authors of a much more learned Pen than my own; but in my humble Opinion, when theſe wild Oats have once taken the Ground, by being brought by Dung they were amongſt, or amongſt the Seeds of Corn that were ſown, or otherways, and, by the Negligence of the Farmer, ſuffered to increaſe, they will multiply at a great Rate, and ſhed their Seed ſooner than the Grain they keep Company with, which, being of a moſt hardy Nature, lies on the Surface 'till plowed in, and there will remain unhurt for Years, 'till the Graſs that grows over them be plowed again; for ſuch is the Power of the ſulphureous Oil with which the Seeds of ſome Weeds are impregnated, that it ſecures them ſound for ſixty or one Hundred Years together, 'till the Ground is plowed up again, and then they will ſprout and vegetate like new ſown Seed; whereas, had they no Oil in them, they would perhaps rot in one Year. Now the wild Oat is one of the chief of the hardy Sorts, and ſo hardy, that, if it is ſown in a rich fine Garden-mould, it will not come up the firſt Year. In this Month, a Farmer, that lives about two Miles diſtant from me, had ſix Acres of Ground over-run with this horrid Weed, which, being a chalky, loamy Soil, was ſo ſubject to the wild Oat, that having a Crop of Peaſe on it, the wet Summer, 1735, the Weed grew ſo thick, as almoſt ſpoiled the Grain; however,

ever, to prevent this Misfortune *in futuro*, the Farmer gave the ſame Land two Plowings the ſucceeding Winter; but, it proving a mild one, the wild Oats were ſo far from being killed, that they increaſed the more for the Plough's Operation; for, about the next *Lady-day*, they begun to ſhew themſelves very thick, which tempted the Farmer to let them ſtand for a Crop; and accordingly he mowed four Loads off theſe ſix Acres, that he made Hay of; moſt of their Stalks were near five Feet long when they were cut, and, being a dry Summer, he inned them on the 26th Day of this Month in good Order, hoping that, by thus mowing them in their full Sap, it might be a Means to deſtroy them. Another Farmer mowed them off a Ridge Half-Acre Land, in the Vale of *Aylesbury*, and he had none to do him Damage for twenty Years after. Another, in *Cheſſum* Pariſh in *Bucks*, plowed his Ground twice, and harrowed it, for, the finer the Ground, the more the wild Oat comes; then he mowed them early, and made Hay of them. This he repeated by mowing them a ſecond Time after Harveſt, and killed them quite.

*The great Boar-thiſtle.* Theſe have a Tap-root, and draw a great Deal of Ground. A diligent Farmer at *Wards-Comb*, in the Pariſh of *Ivinghoe*, in *Bucks*, who had many of them that grew in a chalky Loam there, deſtroyed them by pulling them up with the Hands the latter End of *May*, and the Beginning of *June*. In this Month, this Boar-thiſtle appears alſo in many Hedges, with its red ſeedling Heads, which being of the feathery Sort, if let alone, 'till they are full ripe, the Winds carry them about to great Diſtances, and this may do a vaſt Deal of Harm; therefore be careful to employ the common five Feet long Weed-hook, which will enter into the little Hollows of Hedges, and, in the Thiſtle's green Age, eaſily cut them in two at the Bottom of their Stalks,

Stalks, make them bleed, and ſpoil their Growth. A Keeper of a Park ſet ſome Men to mow ſome of theſe, but they ſaid it was not worth while to run here and there after a Boar-thiſtle; but he anſwered it was, becauſe their Seed would blow a Mile or two, and in Time infect the whole Park.

*The common Thiſtle.* This Sort of Thiſtle has ſtringy Roots, and is one of the chief Curſes of the Ground, ever ſince Man's firſt Diſobedience to the Command of his Creator. This is the moſt common Weed of all others, that infects Vale, and all ſtiff Soils in particular, both in plowed and meadow Lands, and is ſo pernicious, when they grow very numerous among Corn, that, if they are not weeded out, they'll ſpoil it. A Vale Farmer, in *Chedington* Pariſh about five Miles from me, laid out five Pounds in one Summer, by giving it to only one Man for his going over all his Ridge-lands that lay fallow, to mow down the Thiſtles, as they got a-Head, for this he was obliged to have done, leſt they ſeeded and ſpoiled his next Crop of Wheat; but by the Way, I muſt obſerve, that the Farmer was neglectful in his Plowings, or elſe there had not been ſuch Need of employing a Mower.

*The Character of a* Middleſex *Plough-Farmer.*— But, if I miſtake not, there is a worſer Sort of Farmer in *Middleſex*, than the laſt I have mentioned, for ſeveral of theſe do not love to employ their Harrows, and therefore ſeldom uſe them; and if, I ſay, moſt of theſe are thought to be the worſt Farmers in *England*, for getting their Land in a timely fine Tilth, by frequent and right Plowings, I do not know that I do them Injuſtice, for many of their Fields ſhew every Year their great Negleſt, by ſuffering vaſt Numbers of common Thiſtles to grow two Feet, or more, high, before they take them down, which conſequently muſt impo-

veriſh

veriſh and foul the Ground. This puts me in Mind of what I heard another Farmer ſay of them, that if their plowed Land was not extraordinary well kept in Heart, by being dreſſed with their *London* Soap white Aſhes, large Quantities of rotten Dung, and other Manures, they would not have Corn enough to defray all Charges: But where they plow well, and get their Ground into a timely fine Tilth, they get ſometimes forty Buſhels of Wheat, or more, off one Acre; but this is rarely ſeen. Fifteen or twenty is oftener their Lot, from off their three and four-bout-Lands.

*Colts-foot, or Dunny-leaf Weed.* Theſe are one of the Sorts that defy the Farmer's Endeavours to extirpate it, and wholly clear the Ground they have taken a large Poſſeſſion of; which has provoked many to ſay, There is no deſtroying them, unleſs a Houſe is built over them. They have white ſtringy Roots, a very low broad Leaf, that kills or cripples the Corn that ſprouts under them, and are quick and great Increaſers, both by the Spread of their Roots, and by their downy or feathery Seed, if not hindered in due Time. They grow both in light and heavy Lands ſo potently, that they cannot be killed at once, even by the Mattock. In a Field near me, where the Soil is a loamy Gravel, that was well dunged, and ſown with Barley, the Farmer employed ſeveral Hands to pull up great Numbers of them, after a great Shower of Rain: At this Time their Roots came eaſily up, as this Work was done on the thirteenth Day of *May*, 1739; but would not ſooner, becauſe their Stalks were not ſtrong enough to allow a ſufficient Handle. What were pulled up, ſerved to cripple their Growth for that Summer, but did not kill them. Others, in this Month, at the firſt or ſecond Stirre-time, employed Hands

to

to dig them up with the Mattock after the Plough, which will certainly ſtunt and diminiſh their Growth in their next Crop of Grain; but as I have largely wrote on this Weed, how it was killed at a certain Seaſon of the Year by the Plough, and alſo on the Deſtruction of many others, I refer you to the Chapter of *Weeds* in the laſt Month of *May*.— Here then, the new or Drill-huſbandry ſtands a Proof, how much more excellent it is, than the old or *Virgilian* Huſbandry, for, by Drilling, the Horſe-break has an Opportunity of eaſily deſtroying this Maſter-weed, which is the Cauſe of impoveriſhing many Tenants, both in Vale and *Chilturn* Lands, and conſequently of leſſening the Landlord's Rents.

*Shoots of Trees, why they ought to be cut off in this Month.* This Month is the propereſt Time of the whole Year, to cut off the ſide Shoots of Timber, and Fruit-trees, that grow as Excreſcencies, and draw away and employ the Sap to no Purpoſe, and, by which, they leſſen the Growth of the more uſeful Branches, and Shoots of Timber-trees, and the Fruit and Branches of others. If theſe are lopped, or cut off with the Bill, or Knife, in this Month, they will grow no more for ſeveral Years; yet this ought to be done with Judgment, for, if they are large, they are better let alone, leaſt the Sap run out too much, and damage the whole Tree: About *Midſummer* is reckoned the moſt natural Seaſon for this Work, and which I carefully obſerve to do, eſpecially among my Timber-trees.

*Weeding of Liquorice, Woad,* &c. Now carefully weed Liquorice, for, as this Root requires three or four Years to lie in the Ground before it is dug up, nothing ſhould grow among the green Shoots or Stalks after the firſt Year, when they ſuffer Onions or Cabbages to come up for a Crop; but

but the ſecond Year the Liquorice appears, like a Plantation of young Aſhes in Rows, of a Foot aſunder, which are to be carefully kept clean from Weeds by Hand-houghing; as they very well obſerve to do about *Godalmin* in *Surry*, for here their Land is a ſandy Loam, and is eaſily kept by Houghing, in good Order, as I ſaw done in the Year 1738. Alſo weed well your Madder, Woad, Coriander, Carraway, the great Garden-poppy, Flax, Hemp, Potatoes, Teaſels, dwarf Roſes, and other Vegetables.

*Weeding Hop-Plantations.* In this Month, obſerve to keep your Hop-alleys clear of Weeds, for which Purpoſe there are more than ſix ſeveral Inſtruments now in Uſe, as I have ſeen exerciſed in *Kent*, and at *Farnham*, &c. for, by theſe, the Hop is made to ſhoot ſtronger, bloom better, become larger, more in Quantity, and enabled to reſiſt Blights, and the Damage of Inſects, beyond thoſe that want this good Huſbandry. It is for theſe Reaſons, that they employ in this and other Months, in gravelly or ſtony Grounds, the five-prong Horſe-break, drawn by two Horſes, as it is fixed to a two-wheel Fore-carriage: But where the Land is a Sand, or a light Loam, they draw the nine Hough-horſe-break, with two ſtrong Horſes, as this is likewiſe fixed to a two-wheel Carriage, and thus looſen the Earth, and deſtroy the Weeds in a very expeditious cheap Manner; but, where theſe are not uſed, the three-prong Hand-hough, or the four-prong Hand-ſpade, is worked for two Shillings a Day in *Kent*, and with which a Man will ſtir up half an Acre a Day, as they do at *Farnham* with the Beck-hough. By theſe excellent new Contrivances, they keep their Hop-alleys free from Graſs and Weeds; and by which they manage Hop-Plantations much cheaper than formerly, when they knew how to uſe no other than

the common hand-plate Hough; this puts me upon the Praiſe of the prong Hand-hough, and the Prong-ſpade, which will excellently well looſen the Ground, and kill the Weeds, and yet not tear nor cut up the Roots of the Hops, as all the Plough Inſtruments will very much do, if they are ſuffered to go deep enough; and as theſe two Tools may be made to clear a great Deal of Ground in one Day, and coſt but a Trifle at firſt, I am of Opinion, that they would be much more in Uſe, if their Value were more known. If the Leaves of Hops are much eaten by Inſects, they truſt very much to a *Midſummer* Shoot, that often helps in recovering this Malady; becauſe then come out new Shoots and Leaves. Rain waſhes off the Flies and Lice in the upper Part of the Vines, more than the lower, by Reaſon the lower Leaves are harder to come at.

*The Management of the* Kentiſh *Hop, and how to kill the Lice, and keep off Flies and Worms that ſpoil them.* In the Year 1737, I heard of no more than one intire Acre here that was planted with the *Farnham* or *Surry* pale Vines, for the *Kentiſh* Sort are generally of a purple or brown Colour, and ſo is their Hop: Here they employ in this, and other Months, the prong and ſheim Plough, and other Inſtruments, for cleaning the Alleys, and killing Weeds: Now, beſides the many Caſualties that Hops are liable to ſuffer the reſt of the Year, in this Month, and in *July* and *Auguſt*, they are ſubject to the black and green Lice, Fly, or Worm, the Fire-blight, and the Mould or Dwindle, which are the moſt deſtructive Incidents attending Hop-Plantations. The Lice are bred by Mill or Honey-dews, or Fogs, which appear whitiſh at firſt, and are numberleſs, ſometimes, on one Leaf, and which they eat in little Holes, and thereby venom, make it ſhrivel up, and dry away. At a

greater

greater Age, it's called the Collier-fly, becauſe it turns black, and becomes large, and will then feed on the Sap of the Vines and Hops, and Leaves, ſo as to make them look in Summer, with a Winter Aſpect, if the great Rains do not waſh them off in Time. To prevent and Cure this Misfortune: — Put ſome Stone-lime on each Hill, and the firſt Rain will cauſe a Fume, that will do Service. In this County, are the largeſt Plantations of Hops, of any in *England*, and the People juſtly allowed to be the acuteſt of all others in the Management of them; their Binds or Vines, Strings or Wires, are almoſt all of the Red or Purple, or brown Sort, and produce, for the moſt Part, a cloſe brown Hop, which, they ſay here, never deceives the Buyer; as being far better than the large *Suſſex*, looſe, or flaggy Sort, though paler in Colour. Here they ſcorn the beck and broad Hand-hough, as being too tedious in their Operations, and employ, in their Stead, others of quicker and cheaper Service, being moſt of them new invented Machines, that dexterouſly open the Ground, kill Weeds, and let the Sun and Rain eaſily into the Roots of the Hops. In 1738, I was in the largeſt Plantation of this County, containing forty Acres; but it ſeemed to me to be rather too large for its Owner, becauſe it was in the fouleſt Order of any I ever ſaw. Within theſe four Years laſt paſt, they have greatly increaſed the Growth of the *Surry* or pale Hop; and are very diligent every Year in carrying on its Propagation, ſince the paler Sort of Malt-liquors are more and more in Eſteem throughout our Iſland. The great Uſe of this moſt ſerviceable Vegetable, I have wrote of in ſeveral other Sorts of Books, in Hopes to promote a double Conſumption of it; and in ſuch a Manner, as I am ſure will tend very much to

the Health and Pleaſure of the Drinker of the Malt-liquor it is boiled in.

*The Management of Hop-Plantations in* Surry, *&c.* About the latter End of this Month, the Hops have done Running their Length, and begin to ſpread and branch. In Caſe, they continue Running too far, ſtrike off the upper Part of their Vine or Wire, with a Wand or ſmall Stick, or otherways, and direct the Top to grow in a lower and better Form, that it may ſpread at a proper Height, for ſuch Spreading makes Hop-Vines and Vegetables bear moſt Fruit. If the Top of a Vine by Accident breaks off, or is done on Purpoſe, the next Knot will throw out another Branch, that muſt be guided by the Hand about the Pole, and it will take and bear well. In this County, and eſpecially about *Farnham*, they beck-hough their heavy loamy Land, twice, at leaſt, in a Summer; but, if it is a light, ſandy Loam, they only uſe the Broad-hough, or Spade, twice or thrice. In this Month, they pare the Earth in many Places, and throw it over the Hills; and this ſome do two or three Times in a Seaſon, to nouriſh the Hop-roots, by keeping the Hills hollow and moiſt. One Acre of Hops is ſaid to coſt twenty Pounds a Year for Rent and all Management, and yet liable to be damaged by fifty Accidents in that Time. But, when a ſucceſsful Year attends a Crop of Hops, there have been a thouſand, or fifteen hundred Weight of them, got off that Quantity of Land, and ſometimes more. Here they ſpare no Coſt to keep their Alleys clear of Weeds, and accordingly employ the moſt Day-labourers for this Purpoſe, of any People whatſoever, to dig with their Beck-houghs, and hough with their Broad-houghs. If it be a very dry Time in this Month, and your Conveniency will allow it, water each Hill, by pouring it into a Hole on the Top of it,

made

made with the ſetting Iron Crow; this may cauſe you a good Crop, when your Neighbours miſs. Or you may make Uſe of the *Dutch* Squirt, that caſts its Water twenty Feet high, and thereby waſhes off the Breed of the Lice, Lady-bird, and Slug, or Snail, that, as I ſaid, are bred and nouriſhed by the Honey-dews, which generally fall in this Month. The *Surry* Hop and Bind are of a white or pale Colour, large, early ripe, and excellent for pale Drinks in particular. Now carefully tie up theſe Vines to the Poles where they are wanting, with Worſted, Ruſh, or Thrums, by twiſting and faſtening the one to the other, that before were ſtrained away by their Weight, or by Winds, for Vines ſhould never grow looſe from their Poles. But of *Hops*, more in other Months.

*To kill all great Weeds, the beſt Way.* Now, with Mattocks, let two or more Men follow the Plough, while you are ſtirring your Land for Turneps, or Wheat, or Cole, in this Month. This Work gives the Farmer an Opportunity, the beſt of all others, to deſtroy or cripple all Sorts of Weeds, as the Cammock, which is thought to be only a Honey-ſuckle Root, 'till, by Age, its many ſtinking, ſtringy Roots become as large as a little Finger, and run very wide and deep into the Ground; the Cats-tail, or Wild Burrage-root, increaſes faſt in light Land. About two or three Miles off *Godalmin* in *Surry*, in a large Field of a ſandy Loam, I ſaw ſuch a numerous Parcel of this blue Weed, and the red Poppy, that I could hardly perceive any Oats that grew among them: Likewiſe the deep-rooted Hog-weed, Clob-weed, wild Paſnips, Dew-berry briar Roots, Honey-ſuckle, Dock, Gould, and Thiſtles, and others, which in this Month will bleed, or Iſſue out their Sap, on being wounded by the Mattock and die, or at leaſt be ſo ſtunted by this and after Plowings and Diggings,

gings, that in Time they may be overcome. This Piece of Huſbandy ſtands my beſt Friend, in the Deſtruction of Weeds, and which I every Year have done in the Fallow-ſeaſon, while the Plough is at Work; but above all Times and Seaſons in the Year, there is none ſo good as the Month of *Auguſt*, for then Weeds are in their laſt autumnal Shoot, and then it is, that one Stroke of the Mattock does more Service towards their Deſtruction, than two in former Months.

*The Breed of Weeds.* Our Farmers in general, beſides the ſeveral Weeds that are bred from their own Seeds, that are ſown, or otherways brought into the Field, believe, that many are naturally bred by the Ground, and come up ſpontaneouſly, without any being in the Place before-hand, and this, partly, by good and bad Tilths, and the Seaſon of the Year: Sowing Wheat early in a fine dry Tilth breeds the Poppy, Horſe-gould, and Chick-weed; and if a fine Tilth is ſown early, and wet, then it breeds the ſtinking *May*-weed, *&c.* all which are beſt prevented by ſowing ſuch fine ſweet Tilth-grounds in *October*, in a dry Time. But when Land is in a coarſe Tilth, whether Wheat is ſown early or late, wet or dry, Weeds will breed and multiply, in great Numbers among it. Others are of Opinion, that no Weeds grow without their fundamental Seeds, nor is it any Proof they don't, for not appearing among ſome Sorts of Crops, in particular Years, when at other Times they do: for this Difference may be owing not only to wet and dry Sowings, froſty Winters and Springs, a wet or dry Summer following, or to fine and rough Tilths; but alſo to the hardy Nature of the Seeds of ſuch Weeds, which won't ſprout the firſt Year in any Ground whatſoever; and the next they can't, by Reaſon of the Plough's diſturbing them, the little while

the Crop is on the Ground, or by Reaſon of the great Luxuriancy of the Grain. There was a great deal of Wheat killed, by the Severity of Froſts, in the Winter and in the Spring-ſeaſon, 1740, which gave Room for the Curlock and many other Weeds to come up, and grow ſo rampant, that they crippled the Wheat, and made it in this Month look very thin, but the Weeds in great Perfection; however, in Drill-tilths, there is no Weed, be it ever ſo hardy and ſtubborn, need be ſuffered to grow here, for that they may be more eaſily prevented and extirpated by the houghing Inſtruments, cutting with the Knife, digging up by the hollow Trowel, or by pulling up with the Hands.

*Weeding Horſe-beans.* There are ſeveral Ways that are practiſed to ſet and ſow Horſe-beans for Houghing. About *Gansford* near *Harrow on the Hill*, they ſet them a-croſs their ridge, wet, Broad-lands in Rows with the Hand about a Foot or ſixteen Inches aſunder, and two Inches and a half apart each Bean. Here alſo they draw the Hand-plate Hough the firſt Time, when the Beans are four Inches high and ſet or ſowed long-ways; and about five Weeks after when the Weeds, that were laſt houghed up, are dead, they hand-hough again, by drawing up the Mould to the Roots of the Beans, and afterwards again, if they ſee Occaſion. Others ſow Horſe-beans out of a Hand-box, in Drills made by the double Broad-board Plough, and hough ſeveral Times between with Horſe-breaks, as they do about *Aſh* in *Kent*. Others, the beſt of all, ſow their Horſe-beans out of a Hopper fixed, over the Beam of a Drill-plough, in Rows, at eighteen or twenty-four Inches aſunder, and draw the three Hough-horſe, or plate Horſe-break, between them at four Inches high; a ſecond Time at an older Age, and a third when

when in Bloſſom, with the Help of a hand-plate Hough, to bring and lay the Earth nearer to the Roots of the Beans, than the Horſe-break can. But in the Vale of *Ayleſbury*, where they ſow and plow in their Horſe-beans promiſcuouſly in their Ridge-lands, they uſe no Inſtrument for this Purpoſe; for here the Sheep are the beſt Weeders, which they ſuffer to go amongſt them, even to their Bloſſoming-time. In other Parts, ſome uſe the three-prong Horſe-break, where the Ground is hard, or ſtony, which will looſen it, kill Weeds, and prepare it for the Horſe-break Plate-hough, that throws up the middle Mould to the Rows of Beans; but, as I ſaid before, others ſow Beans out of a Hopper of the Foot Plough in their Ridge-lands, in *Ayleſbury* Vale.

*Weeding Peaſe.* Peaſe are likewiſe ſown in Drills ſeveral Ways, as Beans are, and by ſome ſet acroſs their broad wet Ridge-lands; but in this laſt Way, they commonly make Uſe of the rouncival Sorts. In *December*, 1741, I had a Commiſſion to ſend a large Quantity of ſeveral of the biggeſt Sorts, into the North, for ſetting them in their Field Ridge-lands, of which more hereafter in a proper Month. In Chalks, Gravels, and other dry Grounds, where Pea-roots are often dried up and killed by long Droughts; if they would ſow them here in Drills, they would not loſe ſo many Crops as they do, by ſowing them in the random Way. Where Peaſe are ſown for Peaſecods, they not only hough them ſeveral Times, but alſo turn the Rows now and then as ſoon as they have gathered the ripeſt, for, by thus turning them to the Sun and Air, the greeneſt or youngeſt will grow and ripen the ſooner; but, of *Weeding Peaſe*, ſee laſt Month.

CHAP.

## CHAP. VII.

### *Of* SAFFRON, *its Culture, and after Management.*

*Of Saffron.* As this moſt uſeful, valuable Vegetable has been wrote on by ſeveral learned Pens, in a very ample and nice Manner, I don't here pretend to mend what they have done: But my Deſign is by this Chapter, only to put ſeveral in Mind of the great Opportunity they may enjoy, of improving vaſt Numbers of poor open Field Soils, which at preſent lie neglected in a great Degree, by ſowing ſuch Seeds on them for Crops, as ſeldom anſwer to any conſiderable Advantage. In this Month, they take up the Roots of Saffron, and plant them in light, dry Ground, eſpecially in ſuch Sort as lies about *Keſtever*, two Miles wide of *Saffron-Walden* in *Eſſex*, which is a chalky Loam, for this Vegetable will grow in moſt dry Soils, but refuſes Clays, and wet Earths. Chalky, loamy Lands, ſome of the Heath-grounds in *Surry*, the dry downy Sort in *Wiltſhire*, the hurlucky Earths in *Edgborough* Pariſh in *Bucks*, and even in many other poor Soils, not worth at this Time above a Shilling or two an Acre, whoſe Earths are deep enough, are very fit for this Purpoſe, provided they lie with a ſmall Deſcent, are by ſeveral previous Plowings got into a fine Tilth, and well dreſſed with the Fold, Rabbits, Fowls, or ſhort rotten Horſe-dung, Rags, or enough of Oil-cake Powder, *&c.* that muſt be plowed in once or twice, ſo that they may be well incorporated with the Ground. Or if it be Heath, or Wood-land, then the Roots muſt be forced up, and burnt, with their Surface of Earth, into Aſhes,

which will prove a good Manure. A ſandy Loam is alſo an excellent Soil for this Purpoſe, and when all is readily thus prepared, with the Hand-hough make Drills, or Furrows, three Inches deep, and as near together as the Ground will allow, and plant the Saffron Roots in the ſame, at three Inches aſunder, covering all with the ſame Earth by a Hand-rake, and ſo proceed, till a Bed of four Feet wide is made; then leave a Path of eighteen Inches wide, and make another Bed, as before: But this Work may be much cheaper and quicker done with the excellent three-wheel, or pulley-drill Ploughs, ſo far as concerns the making of Drills. About this Time of Year, Saffron Roots may be bought by the Buſhel for a ſmall Charge, in ſeveral Markets in theſe Parts, and carried to diſtant Places for making Plantations. Now, for this Purpoſe, there ſhould be a conſiderable Number of roddled Hurdles got in Readineſs, to incloſe two or three Acres in the common Field, as is uſually done, to prevent the Damage of Hares, and other Enemies, and, by next *September*, you will have a Gathering. But the Years afterwards, you will have full Crops, if the Seaſons are propitious. Three Years Crops may be expected from theſe Roots, and then the Roots are to be taken up at the following *Midſummer*, to be planted in another Ground, which is often done in the ſame open Field near the laſt, and the old Ground may be plowed, and made ready for ſowing a Crop of Wheat, *&c.* The *Engliſh* Saffron is the beſt Sort of any in *Europe*. An Acre commonly yields ten Pounds Weight, and ſometimes as much more, and ſold at deareſt for five Pounds a Pound Weight; but at the cheapeſt for twenty or thirty Shillings a Pound. I thought it a fine Sight in the Month of *September*, to ſee twenty or thirty Hands

Hands employed in a two-acre incloſed Piece of Ground, about Day-break, very buſily picking out the Saffron Flowers, at *Keſtever* aforeſaid; but more of this in the Month of *September*.

## CHAP. VIII.

### *Of Cutting down, and Gathering ſeveral particular Vegetables.*

*Weld or Wold.* About the Beginning of this Month, Weld is commonly ripe, as may be known by its yellow ſeedy Head, and then it ſhould be pulled up by the Hands, and bound in Handfuls with the ſame Stalks; four of which are to be ſet up one againſt the other, to dry as they ſtand in the Field. When it is enough, ſpread a Sheet, or other large Cloth, on the Ground, and rub the Ears or Pods one againſt another, and the Seed will come out, which is to be preſerved for Sowing, at the next Seaſon of the Year: Then tie the Stalks, with their Roots on, up in Bundles, and carry them into the Barn. If it will not ſell for a good Price the firſt Year to the Dyer, it may be kept till the ſecond or third. A Load has been had off one Acre, and ſometimes a Load can't be got off ten. Twenty-eight Bundles make one Load, which, in the Year 1738, was worth ten Guineas; and, near *London*, they carry a Load and a half in a Waggon at once. In *Kent* are ſown great Quantities of this Seed: Some rub out this Seed in the Night-time on a Sail-cloth, for, in a very dry Day, ſome of it is apt to be loſt: But as I have publiſhed the Culture and Management of this in laſt Month, I ſhall ſay no more of it here.

*Roſes for the Apothecaries Uſe.* In this Month gather red dwarff Roſes, that ſome cauſe to grow in the Middle of Hop-alleys, for now they begin to be fit to gather, and will laſt gathering near three Weeks. They muſt be pulled off as they ripen, yet they muſt not be full ripe when taken off the Briar-hedge; if they are, they loſe a great deal of their Virtue, and ſpoil. They are to be either dried by the Sun, or by a Fire; and when they are in Order, their dried Leaves may be ſold to Apothecaries for a Pound. Theſe alone, in a right Soil, will pay the Rent of the Ground, though it be four Pounds an Acre, if they enjoy a good Seaſon, under right Management; and by ſome thought to do little or no Harm to the Hop-plantation. This Improvement may be ſeen behind the *King's-Head Inn*, at *Godalmin* in *Surry*.

*Woad.* Now twiſt off the Leaves of your Woad, if they are full broad, and grind them, for making and drying them in Balls for the Dyer's Uſe. The Leaves of Woad dye Woollen of an olive Colour; but are much uſed to faſten in other Colours. Now alſo preſerve the Plot of Ground with great Care, whereon the Seed grows, and keep it well weeded, for, if there be a large Crop, the Land will be the fitter to ſow a Crop of Wheat on in *September*, or *October* following. If the Earth is in good Heart, the Leaves of Woad may be gathered ſeveral Times in a Summer; but the firſt two are beſt: It is much ſown between *Bath* and *Briſtol*, where I ſaw ſeveral Plantations of it: But more of this in next Month.

CHAP.

## CHAP. IX.

### *Of Manures and Dreſſings.*

*Of Compoſts, or Mixtures of Dung, or Chalk, or Lime, Loam, or other Earths.* Of Manures and Dreſſings I have ſo largely wrote, in laſt Month, that I have the leſs to ſay here. If you have not done it in *May*, and the Dryneſs ōf the Weather will permit, empty your Ponds and Ditches in this Month, in order to give the moſt Room for the Reception of Waters, and, at the ſame Time, to enjoy a beneficial Compoſt, which the Mud, that is thrown out, will help to do, if rightly managed: For this Purpoſe, let it lie to dry; when this is done, lay ſome ſmall Chalk cloſe to it, and let it be mixed together into one Square Heap. Others will mix Lime inſtead of Chalk, which will burn up the Seeds of Weeds, take off the crude Nature of the Mud, and, much ſooner than Chalk, reduce its tough Body to a ſhort Conſiſtence: Or you may mix the Shovelings of Dirt, or Turf, or, if you are near enough the Sea-ſhore, Ore-weed, or Sand of any Kind, together. All, or Part of theſe, as Conveniency allows, may be mixed, and, in two or three Months Time, turned and mixed again, and ſo a third Time, if Occaſion be, that all their ſeveral Parts may be well incorporated. And, if ſuch a Heap can be got ready Time enough to lay on juſt before the laſt Plowing for Wheat, you may depend on it to be one of the beſt of Dreſſings for almoſt any Soil, and will produce you a plentiful Crop, free and clear of Smut, if other Management is anſwerable to this excellent Compoſt. Small Chalk, or Turf, or Mould got from under Hedges, or the Sullage

of

of Bottoms in the Road way, or *London* Aſhes, or *London* Dirt from off the Lay-ſtalls, are what the *Middleſex* Farmer chiefly makes Uſe of for his Meadow and plowed Lands; and, to give them their Due in this Reſpect, I muſt ſay they are the beſt of Huſbandmen, becauſe many of them fetch their Chalk, and *London* Dirt and Aſhes, five or ten Miles, and ſo work and mix their Heaps by ſeveral Turnings, as to make them almoſt fine enough to paſs through a Sieve or Screen, before they lay it on. The ſame Character I muſt alſo give the *Kentiſh* and *Eſſex* Farmers, who get all the Turf, Mould, and Mud, whereever they can, for mixing it with Dung and Chalk, or Lime, in the greateſt Perfection. As to the Quantity of one with another, there needs no Computation from my Pen, for every Peaſant is a ſufficient Judge of this, becauſe there is hardly any Danger of a Miſtake. I have a great Hole in one of my Fields, which contains, I believe, twenty Loads of ſandy Mud, that it receives from the Shoot of a Hill once a Year: This I have thrown out, and, when dry, I bring to it ten or twelve Loads of Chalk, and as much Dung; or, if I put twenty of each of the two laſt, I don't know where the Harm would be, as it is to be laid on a loamy Gravel, for a Crop of Wheat or Barley; for this Soil, though ſhort in its Nature, yet, on the Fall of great Rains, when it's in a fine Tilth, will run together, like Batter for a Pancake; and when it thus happens preſently after the Seeds of Wheat or Barley are ſown, it will bind them in ſo tight, that many can never ſhoot out; therefore Chalk and other looſe Dreſſings are neceſſary here.

*The great Advantage of manuring Meadow-grounds.* In this Month, as ſoon as the natural Hay is got off, it is excellent Huſbandry to carry rotten Dung, old Thatch, or rotted Straw on new-

mown

mown Graſs-lands; for this is thought by many to be the beſt Time to dreſs Meadows, eſpecially with a Mixture of Coal-aſhes, Dung, or Chalk, or Lime, or Mud, or Mould, that have lain together ſome Time to incorporate in a Heap, and been ſufficiently turned, becauſe there is a long Time for it to waſh down to the Roots of the Graſs, and nouriſh them againſt a freezing Winter and a ſcorching Summer. But to be ſooner in my Praiſe of this Management: You may expect ſuch Manure to bring on the ſpeedy Growth of a fine After-crop, or Ruin, the ſame Year; kill Moſs, keep the Ground moiſt and warm; cauſe Graſs to grow good Part of the Winter, and early in the Spring-time; and bring on a timely Cover againſt the next ſcorching Seaſon: Benefits, that ought to be ſtrenuouſly endeavoured after, for whoever keeps back the Penny here, will, as the old Proverb ſays, loſe a Sheep for grudging a little Tar. And, if I am a Judge of the Matter, it is as much good Huſbandry to dreſs Meadow, as Corn-ground; for, where a plentiful Crop of Graſs is, there may a plentiful Return of Dung and Profit be expected, and, when once ſuch Land is got into good Heart, it may be eaſily kept up. A Truth ſo plain, that a Field of the good and bad Huſbandman decides the Matter on View. And it is a juſt Reproach to the latter, when by this Neglect he breaks, and gives an Opportunity to a more deſerving Succeſſor, who ſometimes, on the ſame Farm, gets a good Living by his full Dreſſings. This alſo declares the Folly of thoſe who hire Farms, and, at the ſame Time, are incapable to give the Land its due Manuring; however, whether it is Want of Knowledge, a willing Mind, or Ability, the Deficiency will ſurely be a Loſs to the Occupier: Accordingly, I have known able Perſons run out conſiderable Sums of Money in

Farming,

Farming, for Want of a right Notion of the Value of Manures and Dreſſings. Others begin at the wrong End of Farming, and allow themſelves in great Expences to erect needleſs new Buildings, or adorn old ones; make large Gardens, *en grande Maniere*, Fiſh-ponds, Viſto's, *&c.* at the ſame Time neglecting the Improvement of their Land, that ought to be firſt remembered to be duly aſſiſted with proper Manures; that would, by them, produce and become a Sort of Fund to anſwer a Number of contingent Charges.

*The great Advantage of manuring Plough-grounds.* Here I have a Taſk, that, if fully diſcharged, would employ my Pen in a very voluminous Manner; but, as a Monthly Book will not admit of it, I ſhall only briefly touch on this moſt neceſſary Article. It is certain, that particular Soils and Situations require particular Manures; and thoſe to be laid on at different Seaſons of the Year, according to the Nature of the Graſs, or Corn, they are to fertilize: To this End, I ſhall give an Account of Dreſſings, or Manures, as they are made Uſe of in ſeveral Parts of the Country: *Firſt*, in the Vale of *Ayleſbury*, they ſeldom employ any other than their Fold, Yard-dung, and Pidgeon's Dung. As to their Fold, they know, by every Year's Experience, that this is the cheapeſt; and, as it is the cheapeſt and eaſieſt to come by, it is the beſt of all others to them. Their Yard-dung, formerly, after it was throwed up in Heaps in their Yards in *April* or *May*, in *June* or *July* following they uſed to lay on their Ridge-lands, by ſpreading it over them, after they had plowed once or twice; and there let it lie, thinking it did a great deal of Good in this Poſture, by keeping in the Spirit of the Earth from being exhaled away, and at the ſame Time lodging the Dews, whoſe Goodneſs, though waſhed by Rains, or dried by the Sun and

and Air; yet, as they alledge, it is not loſt, but is drawn in by the Attraction of the Earth, which it thus enriches. Others of their Farmers, and more of late than ever, carry all their Yard-dung into the Field, as near the Place it is to be uſed at as poſſible, and, with ſome Turf, or Mould, clamp it, to be laid on and plowed in at next Sowing-time; but ſeldom or never turn it. As to Pidgeon's Dung, it is certainly very much coveted by all Huſbandmen, but all cannot have it, tho' they willingly give Ten or Twelve-pence a Buſhel for it, and fetch it ten Miles an End. Others of them will plow in their rotten Dung at the firſt Stirree here in this Month, that it may have due Time to mix with the Earth, and thereby cauſe their Wheat to come evener, than if it was laid on at Sowing-time, and freer from the Danger of Smut. In the *Chilturn* Country, in this Month, all Farmers, who can, employ the Fold, as being an univerſal Dreſſing, and good for all Sorts of Land. Others lay their rotten Yard-dung on at the firſt Stirree-time, and believe it the beſt Seaſon of all others for this Purpoſe, becauſe it will now mix better with the looſe Ground, than if it was laid on at the Fallow, or firſt Plowing for Wheat, in *April*, or at the laſt Plowing, in *September* or *October*; for that, by laying it on in this Month, the Seeds of Weeds, if there were any among the Dung, will hereby be quite deſtroyed; ſo that the Farmer, by this timely Management, expects a Crop of Wheat free of Smut, clear of Weeds, and in an even Growth. At other Times they dreſs with ſeveral other Sorts of Manures; but this in a proper Month. In *Middleſex* they ſeldom fold any of their Land, becauſe moſt of theſe Farmers carry on the Suckling of Houſe-lambs; or if they have an Opportunity, by an adjacent Common, as they have near *Acton*, they

are afraid to keep a Flock of Weather-ſheep for this Purpoſe, leſt they be ſtolen, notwithſtanding the late Act has made it Death; and therefore they dreſs with Dung alone, or, as I ſaid before, with white Soap-aſhes from *London*, or with a Mixture of Dung, Mould, Chalk, or Lime. About *Chaffont*, as they alſo ſuckle Houſe-lambs, now dreſs for a Wheat-crop with Yard-dung, or Mixtures of Dung, Mud, or Mould, or *London* Aſhes; at other Times, with Rags, Soot, Shavings of Horns, or Leather, *&c.* but very rarely with the Fold. Near the Sea-coaſts, in ſeveral Counties, particularly in *Cornwal*, in the Winter and Spring-ſeaſons, when Storms moſtly cauſe the Waves to tear up the Ore-weed from the Bottom of the Sea, and caſt it to the next Shore, they clamp it to rot alone, or mix it with Sand, Mould, or Lime, which will in Time ſo attenuate and divide this gluey Subſtance, as to reduce it into a much ſhorter Nature, and fit it for plowing in, in this Month, or afterwards, for a Wheat or Barley-crop, *&c.* as being one of the beſt of Dreſſings for all Sorts of arable Lands; and ſo are their Pilchards, that ſometimes throw themſelves on their Shore in prodigious Quantities, to avoid their Deſtruction by ravenous Porpoiſes, and other great Fiſhes. But I cannot finiſh here without further remarking, that, if your Soil be a Clay, or a ſtiff Loam, and the Dung be rather long than ſhort, it is beſt ſtirred in this Month, by Reaſon ſuch Dung will have Time to hollow this cloſe, ſurly Glebe, and help much ſooner to bring it into a fine Tilth, for all Dung contributes to looſen the Body of the Earth; and this may be the bolder done, becauſe Clays and Loams do not feed on Dung, like the ſharp Gravels, or like ſome hungry Sands, nor will they mix with Dung half ſo ſoon as the two latter. On the Contrary, if the

the Soil be a Gravel, or Sand, or other hawky Earth, then it is beſt laying all Sorts of Dung on a Wheat-ſeed Time, becauſe, ſuch Ground, being of a voracious Nature, would devout the Dreſſing too ſoon, if laid on early, and then the Wheat would perhaps want Aſſiſtance, by the Time it is half grown; and, as a farther Security to ſuch late Dreſſing, theſe Earths are beſt ſown late in *October*, or early in *November*, that the Dung and Grain may not ſpend themſelves too ſoon. I muſt alſo farther obſerve, that when the Soil, you are to dreſs, is of the ſtiff Sort, and a Mixture can be had of Chalk-ſand, or Shells, or other ſuch ſhort dry Aſſiſtance with Dung, or Mud, *&c.* it is beſt adding the greateſt Part of ſuch ſhort, ſweet Bodies, in making a Clamp, or Heap. And ſo, in Caſe you are to dreſs a Gravel, Sand, or chalky Soil, then moſt Mud, Turf, or Yard-dung will be the propereſt to lay in the mixed Heap: But, as there is hardly any Farmers wants the Knowledge of this, I ſhall not further enlarge on a Matter ſo eaſily underſtood, as Mixtures are. Nor is there any Occaſion for theſe Contrivances, where Crag is found, as it is near *Woodford* in *Suffolk*, nor where Marle, or Maum, can be conveniently had; for theſe two laſt alone are excellent Manures for all Soils in general, that are of the ſhort-bodied Sort.

*Of Sot-manures.* Now is the beſt Time of all the Year for thoſe Farmers, who live within about thirty Miles of *London*, to load their Waggons up with Meal, Fire-wood, Oak, Beech, or Aſhen or Elm Planks; or with Corn, or other portable marketable Goods, chiefly for enjoying a back or home Carriage in the cheapeſt Manner, by bringing down Soot or Horn-ſhavings, Trotters, Hooves, Bullocks and Hogs Hair, Rags, Coal-aſhes, Shavings of Leather, *&c.* while the Roads

are in good Order. Soot, now, is commonly ſold at *London* Six-pence and Seven-pence a Buſhel, when in the Winter and Spring-ſeaſons it is Nine-pence. This we ſhoot down in our Fields, in a round, pecked Heap, againſt next Spring, when we ſow it over our Wheat; and which in the mean Time, by being hurdled round, and a little Straw laid on its Top, will keep free from Damage of all Weathers. The Trotters, Hooves, and Horn-ſhavings may be plowed in at the firſt Stirree-time in this Month, and anſwer extremely well for ſeveral Years after. But the Rags, Hair, and Leather-ſhavings ſhould be plowed in at Wheat Sowing-time, as the Aſhes are to be ſown out of the Hand on Wheat, Clover, St. *Foyne*, and natural Graſs, in *December*. Now all theſe, and more, we *Hertfordſhire* Farmers make Uſe of, as we are an inland County, and abound with many Sorts of Soils; and I believe I may aſſuredly vouch it, that he, who rents from fifty to a hundred, or more, Pounds a Year, and does not make Uſe of ſome of theſe Manures and Dreſſings for his Meadow, or plowed Grounds, cannot get Money in any conſiderable Degree, notwithſtanding the Conveniency of Commons for his Sheep, and other Home Advantages. For a Proof, in a great Degree, of this: There are three Farms within two Miles of my Houſe, that join together, and rented by three ſeveral Tenants, called *Wards*, whoſe Soils are Loams, Chalks, and Gravels; I ſay, here they often lay out the Value of an ordinary Crop in *London* Manures, before they can obtain a good one. Indeed, when a very long dry Spring and Summer happen, they are liable to loſe Money, inſtead of getting it, by the burning Quality of theſe Dreſſings; but, when they are attended with ſufficient Moiſture, they commonly have double Crops to what their Neighbours have,

have, who made Uſe of none of theſe auxiliary Helps: For, though the former are ſubject to ſome fatal Incidents, by Weather and Inſects, yet it is well known, that no Farmers, in our Parts, get more Money, in Proportion to their Farms, than theſe do, notwithſtanding their Lands are of the poorer Sorts. In this Month, as ſoon as the young Turneps have ſhewed all their ſeedling Heads above-ground, ſome have ſown *London* Soot over the whole Crop, which will certainly preſerve them from the Fly and Slug, and keep them from the Thief. But this Manure is apt to imbitter them with a diſagreeable Taſte to the Cattle who are to eat them; it is but ſeldom put in Practice; nor is there a Neceſſity for this, or any other of the powder'd Antidotes, when I have communicated a cheap and beneficial Ingredient, that will fully anſwer this Purpoſe without damaging the Turneps, and which is to be had in moſt Parts of *England*, where Soot, *&c.* cannot. Alſo, in next Month, I intend to give an ample Account of making Aſhes by burning Clay, and thoſe made from Peat.

## CHAP. X.

### *Of Natural Graſs and Hay*, &c.

*To chuſe a good Scythe.* Look along its edge, and, if you find it is a little in and out, it is a good Sign: The Reaſon is, becauſe, when the Steel is well mixed, of a right Sort, and truly laid in with the Iron Part, after it is quenched, it will turn in and out; which is the Nature of fine Steel; but, when it is coarſe Steel, and little of it, after it is quenched, the Scythe will remain ſtraight and ſmooth. Some try it with a Nail, that they draw

draw hard on the Edge, and, if it notches, *it is* hard; if it turns, it is ſoft: Of the two, the hard one is the beſt, for this may be ſomewhat ſoftened, if it is let to lie expoſed all Day in the Sun now and then. Others obſerve, if there be any down-right Cracks towards the Back; when there are, it is a Sign of a good Scythe; for there is this Difference between a good one and a bad one: A Man can earn more Money, do his Work more eaſily, and in leſs Time, with a ſharp Tool, than with a blunt one. And ſo much Streſs is laid on this Conſideration, that our Labouring-men, who annually go to mow in the *Middleſex* Meadows, carry two Scythes a-piece with them, which every other Night they commonly grind (*A Whet*, ſay they, *is no Let*) that one may relieve the other, and thus be Maſters of a thin-edged Tool at Pleaſure; for, by mowing an Acre of Graſs or more in one Day, and often whetting, a Scythe quickly gets a round, thick Edge. The Fame of the late ——— *Hanchcomb*, a Day-labouring Man at *St. Albans*, is well known, in our Parts, for his exceeding all in the Art of Mowing: His common Stint was two Acres of Graſs, and ſeven Acres of Oats, in one Day; and accordingly he would undertake to mow with any Man whatſoever, inſomuch that many of the vulgar People reported, he did it by the *Black Art*: But in Time the Truth came out, and he was known to go down to *Birmingham*, and there be at an extraordinary Charge for a Scythe of all the beſt Steel, which, with his great Skill in Whetting, and ſuperior Strength of Body, made him out-do all others. But there is another Way, obſerved by ſome of the Skilful, to chuſe a right Scythe, and that is, When they ſee a Scythe marked with one Cut or Notch, they believe it to be made on a *Monday*, or the firſt Working-day of the Week, and refuſe it; becauſe, the Fire,

Fire being put out a *Saturday*, the Hearth or Fire-place, is too cold to give ſuch a neceſſary Heat, as to make a true Scythe: On *Tueſday* they mark it with two little Notches, *Wedneſday* three, and *Thurſday* four; but all theſe are not approved, 'till they ſee five or ſix Notches; this, as they imagine, ſeldom or never fails of being a good one. Another from *Birmingham* had a Scythe as ſmooth as a Looking-glaſs, and that ſhined, as if Strakes of Fire were in it; this Man would go as far again as another could, with only one Whetting.

*Mowing Natural Graſs, when.* In our Parts, the high ſituated, flat, clayey Loams are rarely mown 'till *Midſummer*, for 'tis then the white Honey-ſuckle (which immediately ſucceeds the red) appears with the Rattle-graſs, and others, that are then ripe, which ſerve as ſo many Indications of its being fit to cut; for, if it is done ſooner than the Sap is at its Maturity, the Hay will ſhrink, and weigh the leſs; and, if it ſtands longer, it is apt to rot at Bottom, weigh light, and be of a ſpungy, hollow Nature, that does little more than fill the Belly of the Beaſt, when the true upland, meadow Sort, mowed at a right Age, will be Oats and Hay, in Compariſon of ſuch foggy Food. I own, that we in *Hertfordſhire*, by ſuch a late firſt Mowing, are deprived of the Benefit of a ſecond the ſame Summer, which thoſe Farmers near *London* are intitled to, who can get Dreſſing enough to make their hot Gravels and cold Clays return a quick After-mead. But then we have this Conveniency, that, when they are burnt up with early Heats and Droughts, our Sort of elevated Clay-grounds will nouriſh a late Crop, that often enjoys Showers of Rain, after their's are cut down, and becomes a good Bulk. And as to our After-mead, or ſecond Crop (which, in our Parts, we cannot, without exceſſive Charge, get Manure for) we keep it growing

growing 'till *Michaelmas*, and feed it 'till *Chriſtmas*; which enriches the Ground, and ſupplies, in ſome Meaſure, that Deficiency. In ſultry Weather it's beſt mowing Graſs early in the Morning, while the Dew is on it, for then it's much better cut, than in any Time of the Day afterwards; and it ſometimes happens, when the Weather is favourable, and the Crop thin, that we get the Hay in the very next Day. Others obſerve to begin Mowing, when ſeveral of the Graſſes are near Seeding, their Stems full grown, or when they are yelloviſh at Bottom. On the twentieth Day of *June*, 1740, a Sort of Spittle was ſeen on Graſs, which, about *Stanmore* in *Middleſex*, is called *Wood-ſeer*, occaſioned, as they ſay, by the Weather, which, at this Time, was cold Nights, foggy Mornings, and very hot Days; this proved a Token to them for haſtening their Mowing, for, on this Sign, they believe the Graſs-hopper will breed from this ſpitty Matter, and then they will eat up the fine ſhort Bottom-graſs, and become ſo numerous, as to jump before the Scythe in Swarms.

*Of Mowing Natural Graſs.* There is a great Difference in Mowing natural Graſs, for ſome Mowers will leave (as we ſay) their Wages behind them, by not cutting the Graſs ſmooth and clean off. One Sort of Mowing we call,

*Lopping In.* This is done when a Mower heaves up his Scythe eighteen Inches, or more, from the Ground, and generally with a Swing from the right firſt, lops in before him to the left, by which he is ſometimes forced to chop twice, inſtead of once, and then Part of the Graſs is ſo ſmall, that the Rake can't take it, which cauſes a conſiderable Loſs in a large Field; and it is for this Reaſon, that the *Middleſex* Farmer won't admit of ſuch Mowing, though it is very commonly practiſed in the *North*,

*North*, as an eaſier Stroke, than a more even one.

*Ribbing Graſs.* This is occaſioned by the Mower's ſaving himſelf ſome Labour at firſt, and therefore he ſtrikes ſhort Strokes; whereas, if he took a round, even, ſweeping Cut, it would prevent this Loſs; for, by this Sort of bad Mowing, there is a great Deal of Graſs left uncut, as appears by the Ribs, or Semicircles, remaining behind: Both theſe Misfortunes proceed from Want of more labouring Strokes, in an even, round, low, ſweeping Way.

*Driving a Scythe in Mowing.* This is likewiſe thought to be wrong Management; for, if a Scythe is mowed too long with, before it is whetted, they muſt whet ſo much, that it ſoon acquires a thick Edge, and then there muſt be the more Labour, and Time employed in Mowing, beſides Mowing the Graſs very much to the Farmer's Diſadvantage.

*How a young Mower had like to ſpoil himſelf.* A luſty young Man went out of *Hertfordſhire* to mow in *Middleſex*, and, getting into a Company that mowed by the Acre, he preſently was all of a Lather, by endeavouring to keep up with them, for he muſt either have died, or given out: On this an old Mower took Pity on him, and altered his Scythe, by hanging it wider and flatter for mowing; whereas, before, he had hung it ſo, that the Edge cut too low, and the Scythe hung too narrow, which obliged him to ſtrike three Strokes to the Company's two, to keep up with them. But, after this Alteration, he mowed as well as the beſt of them.

*Several Ways of making natural Hay.* Our common Method in *Hertfordſhire* is this: About eight a Clock, or ſooner, the ſame Morning the Graſs is mown, we ted or throw it out as thin as poſſible, ſhaking it very carefully, that none remain matted, for, on this firſt Flinging it abroad, very

much depends the making of good Hay afterwards. The ſame Day, if the Weather and Number of Hands will permit, it may be turned once or twice, and after that raked into Wind-rows, and then put into Graſs-cocks, and ſo ends the firſt Day. The ſecond, we fling it out, and ſhake it into ſquare Leets, which as ſoon as done, we rake the Interſpaces clean, and turn it two or three Times before Night; at laſt we rake it into double Wind-rows, which are done by two Perſons raking againſt one another, and then put it into Baſtard-cocks, that are as big again as Graſs-cocks, and ſo ends the ſecond Day. The third, we throw it out into Leets, or broad ſquare Parcels again, and, when the Ground is all well raked between them, we turn it as often as the Weather will permit, which is ſometimes three Times in a Day; and in the Afternoon, about four o'Clock, and before the Dews fall, we cock it up into Heaps, as big again as Baſtard-cocks, and rake all the Ground clean about them, and thus ends the third Day. The fourth, when the Dew is clean dried off, we fling it into Leets again, and, after it has had one Turn, we put it into Staddles, load it, and carry it away into a Barn, Cock, or Stack: But this tedious Way is never done, but when the Weather won't allow its being got in the ſecond or third Day. Some, indeed, who have a great many Hands, will ted their Graſs about ſix or ſeven a Clock in the Morning, and when it is very ſhort, and the Weather very hot, will turn it twice the ſame Day, and get it in the next, by raking it into Wind-rows, after the two Turns, and putting it up in Graſs-cocks, and next Day, with one Turn, rake it up, and carry it in. Others will only give it a Ted as ſoon as mown, at Noon rake it into Rows, and towards Night put it into Graſs-cocks, and ſo on, as I have before hinted: Then, to know

know when it is enough made, take a Handful, and twiſt it ſhort, and, if it breaks eaſily, it is made. For a *London* Market, they endeavour, all that is poſſible, to make it ſo, that it may hold a greeniſh Colour all the Year after; but in *Aylesbury* Vale, and other Parts, they always ſtrive to inn it a little under made, or dampiſh, that it may mow-burn, and become reddiſh, in Order to give the Hay a ſweeter Taſte and Smell, for inviting Cattle to eat a great Deal, and drink much; which they reckon will breed the moſt Milk, or make a Beaſt fat the ſooner.

*How a Perſon ſpoiled Part of his Hay.* He lived about twenty-ſeven Miles from *London*, and, in order to enjoy his Hay finer than his Neighbours, he built him a *Dutch* Barn, in 1738. Accordingly, the ſucceeding Crop of Hay was put into great Cocks, of about half a Load each. Theſe he let ſtand in the Field, with an Intent to carry all in one Day into the Barn; but, heavy Rains falling, he was obliged to defer it, and when fair Weather came, he went to Cart, and carried all into the *Dutch* Barn, where it lay in a bad Condition, becauſe he inned both Top and Bottom, while they were wet; whereas, had he thrown thoſe two extreme Parts out, and dried them after the middle Part was carried, all had been well; but, by this Miſmanagement, he loſt the Selling of his Hay that Year.

*A remarkable Account of Hay that was damaged and recovered.* A conſiderable Quantity of Hay, had been got in ſo wet, that it heated in the Barn to that Degree, as to become black and ſtinking, which they perceived, when they went to take it out the next Winter for feeding Deer: This made them let it lie another Year, and, contrary to their Expectation, it became ſo ſweet by

being mow-burned, that the Deer eat it with all Greedineſs.

*To mow Hay in a Barn, Cock, or Stack, without Danger of Firing.* For this Purpoſe, I uſe a Tub about two Feet Diameter, and three Feet long, or a long Baſket, or four Boards, of a Foot wide each, and four Feet long, nailed together; either of theſe, when the Ground Layer is up to its Top, we pull it up higher, and ſo on till our Mow is finiſhed, and then the Hole, or dry Well, that it thus makes, ſerves as a Chimney in the Middle of it for evacuating the Fume, Steam, or Smoak, that the Heat or Sweat of the Hay cauſes; and by which you avoid the Danger of having your Mow take Fire, otherwiſe you run a great Riſque of it, eſpecially if the Hay is got in damp or wet, as ſometimes by Neceſſity it happens. As to a Cock, or Stack of Hay, that ſtands in the open Air, if of any conſiderable Bigneſs, it cannot be made in one Day, becauſe Hay, laid on in one Day, requires Time to ſettle, before more is added; and for this Purpoſe, it often happens, that they inn ſeveral before they can finiſh a Cock, or Stack. In the mean Time Showers of Rain ſometimes fall and wet the expoſed Hay to great Prejudice, even for whole Nights and Days together. To avoid which, ſome lay Straw on the Top, but this proves a looſe Covering, though it lies but a Day or two: Therefore at *Rotherhith*, or ſome other Place by the River *Thames*, you may buy old Ship Sail-cloaths for a ſmall Matter, and ſow them together till you have one intire Cloth of twelve Yards ſquare, which is the common Allowance. With this, at every Day's End, you may cover your Cock, or Stack, till it is finiſhed, and ſo at any other Time, without being expoſed to the great Damage that often enſues, without ſuch Security. But obſerve, that if there be no Hole or Chimney

Chimney made in ſuch Cock, or Stack, this Cloth will keep in the Heat, and help to fire it the ſooner. On which Account, both theſe are perfectly neceſſary. Some are of Opinion, that Hay is better kept abroad, than in any cloſe Barn, becauſe the Sides of Boards, or Wall, help to make that Part ſtink that lies next to them. And to be more commodious in making Cocks and Stacks, ſome, as ſoon as the Hay is made enough, will put it into many Cocks in a large Field, that will contain about half a Load each, and at the ſame Time tread it well, that it may lie in a pyramidical ſafe Manner from Wets, till they begin the Work of Cocking, or Stacking.

*Curing coarſe Marſh-Hay.* Not only in Marſhes but in many wet, low, Vale Grounds, their Hay is often coarſe, by Reaſon of the Sedge, or ruſty Stalks that grow among the Graſs. A Caſe of this happened in *Aylesbury* Vale, where is a Meadow, about ten Acres, lying near a Water-mill, which was generally flooded, when the Water was pent up at the Mill-head. This cauſed a Sort of Ruſh or Sedge to grow, that made a Hay little better than ſome Straw, eſpecially if they let ſuch Graſs ſtand till it is ripe. The Occupier was told, that Coal or Wood-aſhes, or Pot-aſhes (but the firſt is beſt for this Uſe) would cure it; accordingly many were got and ſown, which, by the very next Summer, not only killed the Sedge or round Ruſh, but brought up, in its Room, a fine three-leaved Graſs, that made the beſt of Hay. How faulty then muſt thoſe be, who will not be perſuaded to ſuch a cheap and uſeful Improvement, as I am ſure Thouſands may enjoy, that now do not. Obſerve, that ſuch coarſe ſedgy Hay cannot well be too little made, for, by making it but little, it will mow-burn, become ſweet, and cauſe Cattle to eat and drink plentifully.

*Further*

*Further Remarks on Hay-making.* At a certain Place about twelve Miles from *London*, they take little Care in the Tedding of their Graſs, but throw it out at a Fork's End, in a careleſs random Manner: This is very wrong, becauſe it is a fundamental Error, for, unleſs Graſs is well ſhook at firſt, it is hardly ever, as I ſaid before, to be thoroughly parted afterwards, and conſequently the more difficult to make it all alike into a pure Hay. If the Graſs is in full Sap, it requires the longer Time to make. The oftener Hay is turned, the hollower it lies, and the faſter it makes; therefore ſome will turn it three or four Times a Day. In Caſe the Graſs-cocks are catched and wetted by Rains, they muſt be daily turned, tho' it rains a little; becauſe, if they are not moved, or turned topſy-turvy, they will grow yellow, or black, and ſtink; for, by turning them, a good Colour is preſerved, and the Sweetneſs kept in. When Rain is apprehended, and the Graſs or Baſtard-cocks are dry, double or treble them for their better Security. Hay, that is made from off Graſs-baulks of plowed Fields, is never ſo good when the Field is under Lent-grain, as it is when under Wheat, becauſe then the Graſs has the longer Time to grow, and the better for ſucceeding the fallow Year. A Gentleman, that bought great Quantities of Hay, choſe rather to have it out of a Barn, than a Cock or Mow, becauſe in making a Cock, or Stack, Rain often happens, and then, the Hay becomes yellow, or hoary. Again, if Hay is cut over-ripe, and waſhed by Rain, it will become black in the Mow, and be little better than Pea-ſtraw; but if it is cut in its full Sap, and it be waſhed, the green Colour will come again in the Mow.

*How a Cock of Hay became damaged.* A Hay-cock, after the firſt Year, grows worſe and worſe

on that Side next to the South, becauſe, this being the rainy Corner, the Wet gets moſtly in on this Side, unleſs it be very well thatched with Straw, down to the Rim or Middle: For Want of this, a ſmall Cock of Hay has loſt both its Scent and Colour at the End of the ſecond Year, an Arm's Length deep; while, on the North Side, it keeps ſound, for which Reaſon, of late, they put their Hay moſtly into Stacks, and ſet the End of them towards the South. And in making a Cock or Stack, they always keep the Middle of it higheſt, for by this they keep the Outſide downwards, which in Courſe will ſhoot off Water the better.

*Rattle-Graſs, its good and bad Properties.* This is one of the natural Sorts, and being a remarkable Graſs, I ſhall here obſerve, that it is in great Eſteem by ſome, who ſell their Hay by Weight; becauſe this, in particular, contains large flat Seeds in its Head, which, above all others, contribute to the Turning of the Scale; and indeed, when cut in due Time, will afford a more ſubſtantial Subſiſtence to a Horſe, than the lanker Sorts; for which Reaſon, many punctually regard the Cutting of this Graſs before it is full ripe, that it may not loſe its valuable Seeds, which, growing in a round, flat Shape, by ſome is called Penny-graſs. But, to theſe good Properties, there belongs a bad one. Before, and after Mowing, it is very apt to imbibe and lodge the Wets, by its ſpungy hollow Heads, which makes it more, than all others, contribute to the Heating, and ſometimes firing a Stack or Mow of Hay; an Article that I thought of Conſequence to give an Item of, leſt, where it grows in great Plenty, a Perſon, through Ignorance, ſhould hurry a Quantity of this Graſs into his Barn, or Stack, in a wettiſh or damp Condition, and ſo be liable to loſe all, by its great Heat or Firing. For which Reaſon, my

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Method of making a Hole in the Middle of the Mow, or Stack, as a Chimney, is hereby ſhewn to be of the more Service.

*Wild Thetch, its Character.* This is alſo an excellent natural Graſs, whoſe long Stalks, in good Land, and in fertile Seaſons, are loaded with many little Kids, that contain Numbers of ſmall hearty Seeds, and is the next beſt Graſs to the Lady's-finger Graſs, that I have largely wrote of in laſt Month.

*How a* Middleſex *Farmer improves his Meadow-ground.* An acute Farmer, who lives about ten Miles from *London*, in a moiſt Summer, has commonly three Loads of Hay off one Acre of Meadow-land; I mean, ſo much, when it comes out of the Barn, and yet never feeds his natural Graſs with Cows or Sheep, only turns in five Horſes into it, and they generally leave a great Deal of Fog to rot on the Ground, which, with the Help of his well turned Dung-hill, dreſs his Ground for another Year: Notwithſtanding, there is this Inconveniency attending ſuch good Management, for as he ſhuts up his Meadow at *Chriſtmas*, leaves ſuch foggy Graſs behind, and manures well, in Caſe a wet hot Summer ſucceeds, the bottom Part is apt to grow rotten before Mowing-time, and then the Crop of Hay is much damaged for a *London* Market, beſides cauſing a great Deal of Trouble and Charge in Mowing it. Yet it is certainly better Huſbandry, than that of ſhutting up a Meadow late; for then, if a very dry Summer follows, the Graſs will be burnt up, for Want of an early Head to cover and ſhade its Roots. In our Parts, ſeveral of our Afternoon Farmers ſowed Aſhes on their Meadow-ground, as a Manure, in the Month of *March*, 1736, and, a very dry Time ſucceeding, they had, in Return, but poor Crops of Hay, becauſe, by ſowing them ſo

late,

late, they helped the more to burn up the Graſs; whereas, had they ſowed them in *January*, conſequently they had had Plenty.

*How others improve their Cow-paſtures.* The latter End of *May*, or about the Beginning of this Month, in many Places that lie in, and about *Middleſex*, *Kent*, *Surry*, and *Eſſex*, their firſt Mowing of natural Graſs is ſometimes over, and then they turn their Cows directly out of their Cow-paſtures, into new mown Fields, and therein keep them the remaining Part of the Summer; ſo that, the Cow-paſtures being now ſhut up, they will be fit to mow as ſoon as Corn-harveſt is done, which often happens by the latter End of *Auguſt*; and then they mow a latter Crop of Hay off them, that ſerves the Cows all the following Winter, which, with Grains, makes them give Abundance of Milk, for ſo they ought, to defray their great Rents, higheſt Wages, and the moſt of Charges.

*Cutting up Thiſtles in Hay-making Time.* Now when your Hay-makers cannot work longer, than a Piece of a Day, ſome of the thinking Farmers contrive to make it up, by employing his Hands to cut up Thiſtles, that commonly infeſt his Graſs-grounds where his Cattle graze: Or, if he has any in his plowed Grounds, he may have the ſame Work done here, to prevent the Blooming of the feathery Seeds of the firſt, and ſtunting the Growth of the latter.

*The State of Graſs and Hay in* 1740, *and* 1741. After the ſevereſt cold dry Winter that has been known for many Years, a dry Summer followed, ſo that that Ground eſpecially, which was dunged late, was dried to ſuch a Degree, that the Graſs, in ſeveral Parts, was not worth mowing this Year, for a great Deal of their longiſh Dung drove before the Scythe, for Want of Rain to rot it, and waſh it into the Earth. A Farmer near *Barnt-*

*wood*, I think, in *Middleſex*, who rented forty Pounds a Year, all Graſs-ground, had but eight Loads of Hay off it. And, from *Watford* to *London*, the yellow Butter-flower grew ſo thick, that there ſeemed, in many Fields at a Diſtance, little elſe but this pernicious Weed. But there was this Conveniency in the Caſe, that what Graſs we mowed one Day, we ſo quickly made Hay of, as to get it in next: A ſhort Horſe is ſoon curried. Where I uſed to ſell thirty Pounds Worth of Hay in a Year for Deer, I ſold this, but nine Pounds Worth; and ſo ſcarce was Hay and Corn, that it occaſioned the Loſs of vaſt Numbers of Horſes and Cows, that were ſtarved to Death in *Wales*, *Cheſhire*, *Devonſhire*, and *Cornwall*, &c. in *May*, 1740, the News-papers mentioned a hundred Horſes Hides, that were brought in one Day to a certain Market in *Devonſhire*, to be ſold; for, in the two laſt Counties, their Surface of Mould, in many Places is ſo ſhallow on Rocks of Stone, that it ſubjects their Graſs and Corn, in long dry Seaſons, to dwindle, and pine away, into very ſmall Crops; ſo that, being deprived, in a great Degree, of both theſe Foods, ſome, I was told, unthatched their very Barns, to ſupply the Want of them, and Straw; for ſo great was this Year's Famine, that ſome of the *Cheſhire* Farmers would find four or five Cows lie dead in their Yards in a Morning, ſtarved to Death: But above all, it proved fatal to Thouſands of poor People, who, as I was informed, were obliged to eat Grains for a Subſiſtence; and many died for Want in ſome Counties, while, in others, the Hearts of ſeveral rich Perſons were ſo charitably diſpoſed, as to extend an Aſſiſtance to their poor Neighbours equal to their Abilities; others again (with a grievous Remembrance I write it) hardly did one charitable Act that was publickly known, in the Pariſh

Pariſh they lived in, or near, though their large Incomes capacitated them to be bright Examples of Benevolence towards their poor Neighbours. But the Winter and Spring, 1741, were more moderate than the laſt, and gave the Farmers, by the Help of ſeveral Thunder-ſhowers, fine Crops of all Sorts of Grain, and Hay; and, that we might enjoy the greateſt Crop of the latter, we did not begin at *Gaddeſden* to mow, 'till about *Midſummer*, when the red Honey-ſuckle turned brown and reddiſh, and the white Honey-ſuckle appeared in all its Length, by which, we know here, that the Graſs was in its full Maturity for cutting down; for, when we mow too ſoon, it is proved by the white Honey-ſuckle's coming up after Mowing, which ſhews that the red Honey-ſuckle, from whence this proceeds, had not ſufficiently expended its Sap; therefore we ſay, at thirty Miles from *London*, that our upland, clayey, loamy, Meadow-ground yields a growing Graſs a Week before, and often a Week after *Midſummer*, where it has a thick Bottom to ſhade its Roots: And ſo favourable was the Weather, in 1741, that moſt mowed their Hay one Day, and carried it in next, as happened the Year before; but the latter Part of this Summer was ſo very long dry, that hardly any had an After-mead to mow, even in their rich *Middleſex* Meadow-fields. However, Providence greatly compenſated this Loſs, by giving us a fine growing Seaſon afterwards, that held mild for Cattle to feed abroad, 'till *Chriſtmas* following. And then begun ſharp Froſts and Snows, that laſted about ten Days, or a Fortnight, and then we had as mild Weather again.

*Saving Artificial and Natural Hay for Deer.*— Now ſave, and lay by, ſhort, fine, ſweet Hay, in a Place by itſelf, for your young Deer, againſt froſty and ſnowy Winter Seaſons, that you may

have it ready to feed your laſt Year's Fawns with, which may be a Means to ſave many of their Lives; if it is put in Places where the old Deer cannot come at it, as it is done in more than one Park that I know of, where ſeveral Holes or Paſſages are made for the young Sort to go in at, but too ſmall for the old ones. Alſo, get in Crops of Clover, and St. *Foyne* Hay, for feeding your old Deer. Theſe artificial Graſſes are found, of late, to anſwer extremely well for this Purpoſe; and, accordingly, they are carried out in hard Weather, and laid in Parcels on the Meadow-ground, where the bigger Sort will greedily feed on it; and where the Situation lies low and wet, or the Soil is of the clay Kind, this hearty Hay will become an Antidote, with the Help of the Brouſe of Aſh, Witch-Elm, and Thorn, to preſerve them from Rotting.

*Selling Hay.* In the *London* Market, the ſame Year it is made, it is deemed new Hay 'till *Michaelmas*, for which Reaſon, the Farmer is obliged to make his Truſs weigh ſixty Pounds to that Time; but, afterwards, their Truſſes weigh only fifty-ſix Pounds a-piece, the new Hay, by them, having paſſed through all its Sweating. Thirty-ſix Truſſes makes one Cart-load. At *New-market*, they buy their Hay immediately out of the Field, as ſoon as it is made, a Cart-load at a Time, which they weigh, Cart and all at once, by the Help of Ropes, or Chains, and Pullies, deducting the Weight of the Cart each Time, 'till they have all their Quantity. This Way was invented to have a much ſweeter Hay, than if they bought it, by Truſſes or Loads, out of a Barn; becauſe Hay loſes Part of its Spirit on Removal. And for this Reaſon it is, that, of late Years, the *Middleſex* Farmers cut their Truſſes all in one Piece, out of the

the Mow-cock, or Stack, inſtead of pulling it out in Piece-meals, to bind it up in round Truſſes, as they formerly uſed to do. Hay from of ſalt Marſhes, if given to a Horſe in a little Quantity, when he comes in hot, he may quickly be turned out to Graſs.

*Of Clover, St.* Foyne, *Trefoil, and Lucern.* As to theſe, I have ſo largely wrote on their Natures, Making of them into Hay, and their ſeveral Uſes, in laſt Month, that I have the leſs to write here. I have alſo there given an Account of that excellent Natural Graſs the Lady's-finger, whoſe good Properties juſtly deſerve to have it propagated in many Places, beſides *Gaddeſden*, where it grows in great Plenty.

## CHAP. XI.

### *Of Suckling Houſe-lambs.*

*HOW the Graſs and Meadow-farmer carry on the Suckling of Lambs.* The Difference between the Graſs and the Plough-farmer, as to their Suckling of Houſe-lambs, is as follows: There are two Sorts of Farmers, who carry on this Buſineſs to a conſiderable Advantage, *viz.* the Graſs, or Meadow-farmer, and the Plough-farmer. The laſt is allowed to have the greater Advantage, becauſe the firſt is obliged to give out, at furtheſt, in *April*, by ſhutting up his Graſs-grounds for Mowing; nor could they hold out 'till this Time, was it not for their laying on of their ſhort Dung, early the Year before, and becauſe they did not mow the ſame Field twice, but fed the After-mead which brought the Ground into ſuch Heart, that, with the Help of a dripping Spring, it often produces a full Crop of Hay, though thus late ſhut up.

up. Some of the *Middleſex* Meadows are ſhut up at *Chriſtmas* from the Horſes and Cows, and then follow the Ewes 'till *Candlemas*, when they are ſhut up for good. From this Meadow-field they go to another, that is ſhut up in the ſame Manner, by firſt feeding the great Cattle, and then the Ewes, 'till *Lady-day*. Now theſe two Sorts are to be mowed twice in one Summer; but others, wherein they keep the Ewes 'till late in *April*, they ſhut up for mowing only one Crop off them, and that is commonly done, after the firſt Crops are all got Home; which laſt Hay is to be kept for feeding their own Cattle in Winter. Therefore it is the latter End of *April*, that many of theſe Farmers are forced to turn ſuckling Ewes into Lanes, and on Commons, and, accordingly, are obliged to give over Suckling for this Seaſon, 'till they begin again in *September*, by buying Weſtern Ewes big with Lamb, and ſome with Lambs by their Sides. Now this forward Sort are, as it were, nurſed up for this Purpoſe, by ſuch rich Farmers in the Weſt, who can afford to lay down ſeveral large Tracts of Land every Year with Clover, *&c.* where theſe Ewes are kept as carefully, as others do their fatting Sheep, without Penning, which cauſes them to take Ram early in *May*, or *June*; and it is theſe, that they ſell for the greateſt Price. In *September*, 1741, the *Middleſex* ſuckling Farmer gave 25*s.* a-piece for them, when Mutton ſold in *London* for Four-pence a Pound; and a Houſe-lamb of ſeven Weeks, ſold about *Alhallows-tide*, for a Guinea at leaſt. The next Time of buying in Weſtern Ewes is about *Chriſtmas*, and then they commonly give about five Shillings leſs, than for the firſt, becauſe the latter are thoſe kept by poorer Farmers, who, to pay their Rents, are obliged to pen or fold them all the Summer; however, it is both theſe Sorts of Weſtern Farmers, who make

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it their Buſineſs to get a right Kind of white-faced large Ewes, that they generally get two Lambs from, before they prepare them for an early Lambing-time, and, accordingly, ſeldom ſell them, before they are full-mouthed Sheep; and it is theſe Farmers, that enjoy a greater Opportunity of ſuch Management, than we who lie more Eaſtward, becauſe their Ground is of a hotter Nature, warmer ſituated, and rented much cheaper, than our incloſed Fields are nearer *London*, which obliges our Meadow-farmers to get a Crop of Hay off them for the Town-Market, as well as ſuckle Houſe-lambs; though it is for this Reaſon, that they cannot carry on the ſuckling Buſineſs all the Year, as the Plough-farmer can; for, as their Ewes get but a poor Living (and ſometimes a rotting one into the Bargain) in Lanes, and on Commons, for ſix or ſeven Weeks together, till they are let again into ſome of their Meadows as ſoon as their Crop of Hay is got off, it prevents their taking Ram, 'till *July*, or *Auguſt*, the common Seaſon for our folding Ewes, and thus ſeldom have any more than one Lamb from a Sheep in one Year. Others of theſe Graſs-farmers think it better Huſbandry to ſend their dry Ewes, out of their *Middleſex* wet, clayey Meadows, into *Hertfordſhire*, from the Time they ſhut up their Fields, to be kept, 'till *Michaelmas* following, on our dry Commons, for which we Plough-farmers enjoy their Dung in the Fold, and by which their Ewes take Ram, and are kept ſound.

*How the Plough-farmer carries on the Suckling of Houſe-lambs.* As moſt of the Graſs or Meadow-farmers can carry on the Buſineſs of ſuckling Houſe-lambs only Part of the Year, the Plough-farmer, by the following Account I ſhall make appear, has the Advantage of doing this Work all the Year, with the Help of his Clover, Trefoil, Ray-graſs,

Ray-graſs, Turneps, and Cole, or Kale, *&c.* and, to do this to the moſt Profit, they take Care to feed the Ewes as well as poſſible the firſt four Weeks after Lambing, that they may take Ram, while they ſuckle their own Lambs, becauſe, when they ſuckle the Headers, they will be the more incapacitated; for this Sort of Aliens, being older and ſtronger, will butt their Bags with great Violence, draw their Milk very potently, and ſo fatigue the Ewe, that ſhe will be leſs prone to take Ram. This Improvement is very much practiſed in ſeveral Counties contiguous to *London*, but ſeldom beyond twenty Miles from this Metropolis, becauſe then the Expence of a long Carriage would eat up the Profit; yet I know ſome, at this Diſtance, ſay, they could not pay their Rents, if it were not for ſuckling Houſe-lambs, which require a great Deal of Care and Attendance to manage to Perfection; in Order, to do which, I ſhall here give you an Account of the experienced Methods now in Uſe. But firſt I ſhall obſerve, that there are two Sorts of Plough-farmers that ſuckle Houſe-lambs, the rich, and the poor one: The rich, as he enjoys every Thing in the moſt profitable Manner, needs no Character; but the poor Farmer, who rents but twenty or thirty Pounds a Year (of which there are a pretty many) is put to his Shifts, and forced to manage ſometimes after this Sort: About *Candlemas*, he has thraſhed out all his Grain to pay his Rent, and then he has Nothing to maintain his Family, 'till Harveſt, but Suckling of Lambs; and, as he has but few, or no Ewes of his own, he buys a new-fell Lamb for about Half-a-crown, which its Owner, who has hardly any Keeping for the Couple, for the Sake of that Price, lets the Ewe ſuckle it 'till it is fat, and then the poor Farmer, perhaps, makes ſeven or eight Shillings of it; and

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if the Owner will not let his Ewe ſtay longer, it is returned Home. Thus he goes on, as long as he can, by buying Lambs and hiring the Ewes, which he has often long Journies about the Country to find out. In the Weſt-country, they ſeldom let their Ewes take Ram 'till two Years old, leſt it ſtunt their Growth; and, after they have had two Lambs, they generally, as I ſaid before, let them go into the beſt of Keeping, in order to bring forth a very forward Lamb; and in this good Condition they are brought into *Middleſex*, *Hertfordſhire*, and other Counties, by the Sheep-jobbers, in great Numbers, from *September* to the Spring-ſeaſon; and, as they are moſt of them full-mouth'd, or ſix-tooth'd Sheep, in the cheapeſt Times they are commonly ſold for ſixteen Shillings a-piece, and ſeveral of them can Twin-lambs the firſt Time; beſides which there is this Benefit belonging to ſuch forward Ewes, and that is: The Farmer ſtands a good Chance of having another Lamb from the ſame Sheep in *April*, or *May* following, or ſooner, if it is kept in full Feed. Now moſt of theſe Ewes, if the Weather admits of it, lamb in the Field, but are ſoon taken into the Houſe: And, as theſe Weſtern Sheep exceed moſt others in the Cloſeneſs of their Wool, and Soundneſs of Body, they are the better enabled to go through two Lambing-times in one Year; yet their hard and long Suckling, and their conſtant, daily Drifts afterwards, ſo fatigue them, that they ſeldom laſt above two or three Years in this Service to Profit; for, at the End of that Time, they are generally ſold off to breed Lambs in the common Way, or elſe put into Grounds, after Harveſt, or Hay-time, to be fatted for the Butcher. The Plough-farmers, to carry on this Suckling Buſineſs the better, provide themſelves in Time with artificial Graſſes, Turneps, Rye,

Cole, *&c.* If the Ground is of the light Sort, they generally ſow Clover and Ray-graſs, or Trefoil, together, which proves an excellent Food for this Purpoſe, becauſe of the large, ſucculent Stalks of the Clover, and the early Head of the Ray-graſs, which, in this Manner, will not hove the Sheep, as all clear Clover will: And, when theſe are a full Crop, that they often get by ſowing their Seeds among Oats, or Barley, and ſometimes Wheat, they let it lie two Years, if they dreſs it the firſt with Coal-aſhes, or Soot, Peat-aſhes, or a Mixture of Lime, or Chalk, with Mud, Dirt, or Mould, *&c.* and then, at the End of the two Years, they give it one Plowing in *September*, and harrow in Wheat; but I ſhall write more particularly of this hereafter. The next Food is Turneps, which, after they have prepared the Ground for it, by ſeveral Plowings and good Dreſſing, they often get plentiful Crops of; to which, in hard Weather, they add the beſt of Hay, to ſupport the Ewe the better under her Suckling. The third is Cole, or Coleworts, which is a Seed, at firſt, growing from the Cabbage-ſtalk, that produces a great deal of Milk, and may be come at in ſnowy Seaſons, when all other Vegetables are covered; and will bear eating down ſeveral Times, if preſerved well between Whiles, 'till they get new Heads. The laſt Food is Rye ſown in *Auguſt*, which comes in for a Spring Subſiſtence, and ſerves, with the reſt, as an alternate, pleaſant, good Food, that laſts even 'till *May*. About ninety of theſe Ewes have fatted an hundred and twenty Lambs, from *October* to *Whitſontide*, of their own; an Increaſe, which is owing to thirty of the Ewes bringing Twin-lambs. They alſo, beſides the firſt Purchaſe of Weſtern Ewes make a ſecond in *February*, and longer in their neighbouring Parts, and buy Ewes at ſix, eight, or ten Shillings a-piece; which

which lambing late proves very convenient for continuing the Fattening of Houſe-lambs, and thus enables them to carry on the Suckling Buſineſs all the Year, eſpecially when they can enjoy the Weſtern Ewe's ſecond Lamb in *May*, for a Sheep goes twenty-one Weeks; and thus, they compute they get ten, or fifteen Shillings a Year by each Ewe. I knew one of theſe, who lived near *St. Albans*, bē at a certain Price all the Year with a Butcher in *Leaden-hall* Market, for twelve Shillings a-piece one with another. And, at *Eaſter*, it is cuſtomary for theſe Lamb-farmers to try, who deſerves the Title of *Captain*, by weighing their largeſt Lambs in *Smithfield*; and one weighed above half a hundred Weight, that was ſold for twenty-five Shillings; which exceeding all the reſt, the Owner had an Extra-reward, as uſual. About eight a Clock at Night the Dams are put into a Houſe, and their own Lambs are brought out to lie with them till five next Morning, when they are turned out again. At eight in the Morning, the Aliens, or Mothers-in-law, as they call them, come in, which the Shepherd is forced to hold, while the Lambs ſuck, for theſe will ſeldom or never ſtand voluntarily. At twelve they bring in the Dams, and at four they bring in the Mothers-in-law again; then, at eight, they bring in the Dams for all Night. Some Lambs will ſuck only one Ewe, others two, three, or four, as they are in Bigneſs, and the Milk more or leſs to be had: And, as in the Caſe of Cows and Calves, ſo in this Buſineſs, when the Ewe has lately eaned, ſhe helps to ſuckle another, beſides her own Lamb, 'till it is big enough to take all ſhe gives. But an old Woman, near *Rickmanſworth*, who occupied about ten Acres of Meadow, and kept a few breeding Ewes, bragged ſhe could make as good Lambs, as the proudeſt Farmer of them all, and ſhe did;

for, when an an Ewe had not Milk enough, ſhe would ſupply it, out of a Sucking-bottle, with ſweetened Cow's Milk, that the Lamb would readily take, by frequent Uſe. And ſo it is, that, among many of the Sucklers, they are ſometimes ſo hard put to it for Milk, that they are obliged to ſell a Lamb, before it is thorough fat, to come by a Mother-in-law to help out the reſt. Beſides which, they conſtantly give Stone and powered Chalk in a Trough, for the Lambs to lick. Others, again, will add white Peaſe, ſlitted or whole, that are ſweet and nouriſhing, with Wheat-ſtraw in a Rack, and Litter of the ſame, two or three Times a Day; which is allowed to be better, than the ſofter blue Peaſe and Hay, becauſe they are apt to cauſe a red Fleſh in the Lamb. Some chuſe to put ſtone Chalk in one Place, and powdered in another, with an Addition to this laſt, of Wheat-flour, or a Mixture of the fineſt Pollard. Others, again, will give Oats by themſelves; but few think they are proper. To the Mothers-in-law three Sorts of Lambs are allowed; the firſt Headers, the ſecond Headers, and the Dragons, or thoſe laſt lambed. The Mothers-in-law are commonly above an Hour in ſuckling, when the Dams are not near ſo long. And here I muſt obſerve, that, in this Buſineſs, there is too often a great Error committed, and that is: When they ſuckle the Mothers-in-law, a conſiderable Number is put into one Room, or Apartment, and thereby an Ewe is often miſſed, and goes unſuckled; which occaſions the Milk to dry away, and become exceſſive hot, and makes a ſore Mouth in the Lamb, and ſometimes the Garget in the Sheep's Bag: To prevent this, ſome will clap a Wiſp of Straw, or other Mark, on the Back of that Ewe which has been ſuckled, to know one from the other; and, that theſe Mothers-in-law may ſtand quietly,

quietly, the Shepherd is forced to lay hold of one Horn with one Hand, and the others he puts into the Ewe's Mouth, his Thumb on her Tongue, and his four Fingers under her Jaw, or elſe ſhe will hunge and beat the Lamb with both her Feet and Horns. Here they obſerve to let the eldeſt have the firſt Head of Milk, the middlemoſt next, and the youngeſt afterwards get what they can: For this Purpoſe, where there is a conſiderable Number of Ewes kept, there muſt be three Pens, Rooms, or Apartments, for the three Sorts of Lambs, that the oldeſt may come out firſt, the next oldeſt ſecond, and the youngeſt laſt; and, when they refuſe to ſuck a Mother-in-law, they faſt it, 'till the Lamb's Stomack comes to it. Some will weigh their Lambs every now and then, after a Month old, for a very thriving one is thought to get near a Pound of Fleſh every Day after that Age; and, when they weigh about thirty Pounds, which they generally do at ſeven Weeks old, they ſell them for ten, twelve, or more Shillings. When a Lamb, therefore, is fat for Market, the Day before they carry them to *Smithfield*, which is moſtly done in Bags on Horſeback, to the Number of four, or ſix, they clip off the Wool between the Legs, and on the Tail, and bleed it in the following Manner: *Viz.* They tye the four Legs together, and cut an Inch, or thereabouts, off the End of the Tail, to bleed till the Lamb is ſickiſh; and, if it does not bleed freely, they cut again and again a little more off, and rap the Part with the Handle of a Knife to make them bleed the frimmer; ſo that ſeveral have been cut three Times, before they could bleed enough, for they muſt looſe as much Blood, as will leave their Gums white. If the Lamb has only bled a little, they let him go without doing any thing to the Wound; but, if it was full of Blood, they ſear the End of the Tail, with a red-hot

hot Tobacco-pipe, or heated Poker; or firſt waſh the Part with cold Water, and tie the End of it up with a packthread String; then they ſuckle the ſame Lamb four Times that Day, beſides letting it lie the following Night with its own Mother; and next Morning, very early, carry it away to Market, where ſometimes they will bleed a Lamb again, 'till it cannot ſtand, and tie up the Tail, as before, to give the Butcher the greater Hopes of white Fleſh. Others will never bleed a Lamb above twice, thus: Once on a *Wedneſday*, and, on *Thurſday*, another Cut at the End of the Tail, and do nothing to it, unleſs it bleeds too much; and, on *Friday*, away with it to Market: They alſo often clip the Wool off the Cod, and about it, and rub with Milk the Night before they go to Market. Too much Bleeding weakens and ſpoils the Lamb.

*How a* London *Butcher bought a Houſe-lamb twice.* One *Hookey*, a Butcher, having bought a Houſe-lamb for twelve Shillings of an ignorant Country-man, who had not blooded it, according to the common Art, for making the Inſide of the Mouth, and the Eye, look very white, was ſo much diſpleaſed with his Bargain, on Account of the Redneſs of its Gums, that he bid a Man ſell it for him again. On this, ſome of *Hookey*'s Acquaintance, who heard his Diſlike, being willing to have ſome Diverſion, perſuaded the Man to take it into the *Ram-Inn-Yard* in *Smithfield*, to bleed it, and then to let another ſell it. Accordingly *Hookey* came by, and aſked the Price of the Lamb, and finding a white Gum appear, with an Eye of the ſame Colour, gave thirteen Shillings and Sixpence for it. By and by he aſked his firſt Man, If he had ſold the Lamb; and was anſwered, Yes, for thirteen Shillings and Sixpence; and then told him, he bought it himſelf: And it was

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the very same Butcher, that said, he never killed a whiter Lamb in his Life, than this proved, and that, for the future, he would never regard the Colour of either Eye, or Gum. *N. B.* If Ewes are fed with Thetches, either green or dry, they will infallibly cause the Lamb's Flesh to look red.

*A further Account of early Foods, and the Management of Sucking House Lambs.* In *February*, the Turneps commonly grow steely and stringy, so that the Ewes feed on them with a bad Appetite; it is then some open the Rye-field, and bait them in it once or twice a Day, continuing to do so 'till *April*, or *May*-day; for this Rye will suffer itself to be fed down pretty close, and, when shut up a little While, will get a new Head, and so on. I knew one Farmer that fed his Rye-field 'till mid-*April*, when shutting it up for good, he had a fine full Crop off the same, the latter End of *July*, as it grew in an inclosed gravelly Field, which he reaped, and got in well. But the general Way is to feed it 'till the latter End of *April*, and then plow up the same Ground, for getting a Crop of Turneps on it, in two or three Months after. The chiefest Use of Rye is, that it comes in Season before Clover, which gives the Clover an Opportunity of getting a good Head, for carrying on the Suckling Business; and as the Ewes give Milk, they are not so subject to hove in it, as dry Sheep are. Others will feed Rye in a dry Soil, 'till the latter End of *May*, and then plow several Times, to get the same Ground into a Tilth, for sowing Wheat at *Michaelmas* following. Others will feed their Cole or Kale, 'till a Week in *May*, that they sowed the latter End of *August*, or in *September*, for their suckling Ewes; but the common and best Way is, to sow Cole-seed in *July*, or the Beginning of *August*, in their moist, stiff, well-dunged Lands, for Winter or Spring Feeding; but be sure

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to let them have chalk enough, for theſe Creatures are ſo fond of it, that it ſhould be given them freſh, at leaſt once a Day, both in Powder, and in little Bits together, becauſe they take a great deal of Pleaſure in Crumping, as well as Licking it, and that even at a Week old: Therefore, at the Bottom of their Racks of Straw, there ſhould be alſo laid Chalk-ſtones all along, that they may enjoy this fine whitening auxiliary Food when they pleaſe; for this not only prevents their Scouring, and gives them a good Appetite, but will alſo add a conſiderable valuable Whiteneſs to their Fleſh. And beſides all theſe, there ſhould never be wanting a conſtant Supply of Wheat-ſtraw, given them, as I ſaid before, twice a Day in their Rack, for this will ſcour their Stomach, faſten their Food, and create them a craving Appetite. Some lay ſuch Streſs on Oats, that they give them in a Mixture with powdered Chalk twice a Day, that the Lambs may enjoy them freſh; but others refuſe it, as thinking they contribute to the making the Fleſh reddiſh. Theſe artificial Foods furniſh the Plough-Farmer with valuable Opportunities of making a continual Profit of his Houſe-lambs; for, by his Variety of warm Meats, one or other of his Ewes may, perhaps, naturally take Ram, and lamb twice a Year: But, by the Remedies I ſhall ſet down in next Month, they may be forced to it. But the Meadow-Farmer can't hope for two lambing Seaſons in one Year, who have their Ewes almoſt ſtarved in *April*, *May*, and *June*, when they are obliged to get a ſhort, dirty Bite in Lanes and on Commons. To which I add, in the laſt Place, that to buy in an Ewe with a Lamb in her, or by her Side for twenty Shillings, at *Michaelmas*, and have only that one in a whole Year, and that, perhaps, ſpoiled by ſome Caſualty, is, what has occaſioned ſeveral of late to lay aſide the ſuckling

Buſi-

Buſineſs; but when theſe excellent Receipts are publickly known, and tried, I doubt not in the leaſt, but this Undertaking will not only be renewed by ſome, but followed by great Numbers of Farmers, who live remote from *London*, and near Cities and Capital Towns, that this delicate, pleaſant, wholeſome Meat, Houſe-lamb, may thereby become ſo cheap, as to be enjoyed by Commonalty, as well as Gentry.

*How an Ewe was cured of a Garget in her Bag, which ſhe got, while ſhe ſuckled Houſe-lambs.* This Malady happens now and then, by feeding in flaſhy, dirty Graſs, on wet Grounds, or on Turneps that are daubed in naſty Fields, *&c.* A Farmer, whom I knew, near *Acton*, had one in this Condition, and cured it thus: He mixed a Piece of common Soap, with half a Pint of Gin, as big as a Waſh-ball, and rubbed it now and then.

*Of the Wood-Evil, incident to Houſe-lambs, its Cure.* There were many of the fat Houſe-lambs troubled with this Diſtemper, in *January* 1733, which takes them ſometimes in the Legs, in the Side, or behind, and then it appears in a Lump; when ſo, it muſt be lanced, to let the corrupted Matter out, and then the Lamb will thrive. But ſometimes it is within Side, but then it generally kills them. This Malady is communicated from the Ewe to the Lamb, by the Badneſs of her Blood, which is tainted by feeding on raw unwholeſome Graſs, in the Months of *December*, *January*, and *February*, that, by the Milk, cauſes this ill Humour in the Blood of the Lamb. To cure the Ewe, by making her Milk ſweet and pure, give her a Doſe once a Week, of the Liquor mentioned in laſt Month, for preventing the Rot in Sheep, and after two Doſes given her, you'll find her cured; and, if half the Quantity is given the Lamb, it will have the ſame Effect.

*Suckling Ewes, how they take and catch the Foot-Rot, and its Cure by ſeveral Sorts of Medicines.* This Rot, and the Body-rot, are the two moſt fatal Diſtempers belonging to Suckling Ewes. The Foot-root is taken or catched ſeveral Ways, *viz.* Firſt, it ſometimes happens to the Weſtern Ewes, by their being drove many Miles out of *Dorſetſhire*, *Wiltſhire*, *Hampſhire*, &c. through wet and gravelly Roads, which makes their Feet ſore, and breeds this Malady; and it is on this Account, that ſeveral Farmers are deceived; for, though it does not appear juſt at the Time of buying them, it too often does afterwards, to the Farmer's great Loſs, becauſe ſuch a Sheep does not only ſuffer in itſelf, but will infect others, as I ſhall by and by ſhew. *Secondly*, It is ſometimes bred by Driving the Sheep ſeveral Times a Day from the Field to the Suckling-houſe, over wet, ſpringy, or gravelly Grounds, as many are between *Amerſham* and *Uxbridge*, where their Ewes, for the moſt Part, are fed on artificial Graſſes, ſown on plowed, pebbly Lands, which makes the Feet of the ſuckling Ewes ſore, and by the ſandy and gravelly Earth, they take up, and lodge between their Claws, the Fleſh feſters, and the Foot-rot commences. *Thirdly*, The Foot-rot happens ſometimes to even dry Sheep, as they graze on Commons, whoſe Soils are wet, ſpringy, rough Sands, or Gravels, and that by their only walking to and fro, in Queſt of their Living on the ſame, as ſeveral do on *Buſby*, *Stanmore*, and *Elſtree* Commons: To others but very rarely, near *Gaddeſden*, as they are drove from the Common to the Fold, as it happened to a few that grazed on *Ivinghoe* Common, in a wet, hot Summer. *Fourthly*, But moſt of all other Ways, they take this Malady by Infection, as the *Middleſex* Farmers, and others of the Meadow Sort, allow; for here it is generally brought on at firſt,

by

by the Heat of their Graſs-grounds, and driving the Ewes often to and from them, occaſioned by the great Quantities of rich Dreſſings and Manures they bring from *London*, and lay on the ſame; and when once their Fields are thoroughly infected, they are ſeldom or never cleared of this contagious Diſtemper, while they are Meadows; for ſo I call it, with a great Deal of Reaſon, as thoſe Farmers annually and wofully experience, in the ſeveral Parts about *Rickmanſworth*, *Pinnar*, *Willſden*, *Acton*, and *Hendon*, where, when their ſuckling Ewes are under this Misfortune to any great Degree, they live in vaſt Pain, as is ſeen by their lying down, as ſoon as they come into the Houſe, not caring to ſtand, even while they are ſuckled. But that which is worſer ſtill, is, its cauſing the Diminution of the Milk, the Rotting away of the Creature's Feet, and the infecting of other ſound ones, that muſt be had, on the Failure of theſe, for continuing and carrying on the Suckling Buſineſs, and which are ſure (without the greateſt Care) to be infected, one Time or other, by the *Puſs* or Matter, that ouzes from the ſore wounded Parts; and this not only by being in cloſe Company with the diſeaſed Ewes, but alſo by going in the ſame Meadow, or other Sort of Graſs-fields.

*How a Perſon bought a Parcel of Foot-rot Sheep, and recovered Damage.* In *Devonſhire*, they call the Foot-rot, *Lameneſs*. At *Tiverton* Market, in that County, twenty Ewes were bought at *Michaelmas*, for fourteen Guineas, and warranted ſound; which Caution happened well on the Buyer's Side, for, had he not been under ſuch a Guarantee, he very likely had ſuffered; for, as ſoon as the Ewes were drove Home, they were directly put into a Meadow, among thirty ſound Weathers, who took the Foot-rot from theſe Ewes,

and all of them died in a Month's Time, for the Ewes were infected before they were bought, though it was not perceived by the Buyer, whoſe Name was *John Knight*, of *Broad-Cliſs*, near *Exeter*, a Gentleman Grazier, who lived in his own Eſtate. Upon this, he made a Demand on the Seller for the Damage ſuſtained; but he refuſed, by alledging the Sheep were found on Sale, and that they might take the Diſtemper by Driving. This made Mr. *Knight* apply himſelf to his Landlord, Juſtice *Bare*, by telling him, he had good Witneſſes to prove his other Sheep were all ſound, and that they were wholly infected by the Ewes, who were ſo before Buying, and by no other Means: And that not only his Sheep were deſtroyed, by this very Malady, but his Meadows, where they fed, were alſo infected, and could not be cured of the Taint under four or five Years Time, unleſs they were plowed up. This appearing very plain, the Juſtice perſuaded his Tenant to pay a conſiderable Sum for the Loſs, by telling him, that, if the Caſe was tried at an Aſſize, he very likely would be brought under a Verdict of a hundred Pounds Damage. The above Account I had from Mr. *Knight*'s own Mouth; the 17th Day of *April*, 1740; and which I here offer as a Warning or Caution to all Buyers, to examine well the Parts of the Sheep's Feet, leſt they be bit; as this Gentleman had like to have been. About *Buckingham* Town, they call this Malady the *Halt*: Here the Farmers affirm it is incurable, and kills whole Flocks, for that one ſuch Sheep will infect a thouſand.

Several

Several Sorts of Medicines to cure or prevent the Rotting off of Sheep's Feet.

Firſt, *Take a Piece of Allum, a Bit of Vitriol, and a Bit of white Mercury, or what we call Sublimate, but moſt Allum, and diſſolve in Water; then, after the Hoof is pared, anoint with a Feather, and bind on a Rag.*

Secondly, *Powder ſome Vitriol fine, and apply it to the Part, with a Rag bound on the Foot, let the Sheep be kept in the Houſe an Hour after. This is the moſt common Way that the* Middleſex *Graſs-ſuckling Farmer makes Uſe of.*

Thirdly, *Others will anoint with a Feather, dipped in Aqua-fortis, which burns, heals, and hardens the Hoof at once; and it is for this Reaſon, that the Northern Drovers of Sheep to* Smithfield *carry a little Bottle of it about them, which, being applied with a Feather, will help a lame Sheep, by hardening its Hoof, and enabling it to travel preſently; but ſome of the ſuckling Farmers think it of too hot a Nature for this Purpoſe: However, ſomething muſt be done, or elſe the Sheep's Foot will rot off; and at beſt, many of the ſuckling Ewes, in this Condition, will not laſt longer than ſix, eight, or twelve Months, before they muſt be either killed lean, or put into Grounds to be fatted for the Butcher: For of ſuch a peſtilential Nature is this Foot-rot, that moſt of thoſe Meadows, wherein ſuch Sheep conſtantly feed, are always, little or more, under Infection, which obliges the Farmer to make what Shift he can, in ſtopping or palliating the Cure of this horrid Malady.*

*The Body-rot of Sheep.* Of this I have wrote many Lines in the Months of *April* and *May*, and therefore ſhall write the leſs here, and only repeat my former Accounts, in a very brief Manner, *viz.*

*viz.* That as this fatal Diſtemper is catched ſometimes in the Space of an Hour, by the Wetneſs and Foulneſs of the Feed in Graſs, and plowed Grounds, and alſo by feeding in infectious Meadows, the greateſt Care ought to be taken to prevent it, eſpecially at this Time of Year; for moſt Men fear more the Effects of Summer-floods, than Winter-floods; becauſe, if they happen in a great Degree in hot Weather, they cauſe the greateſt of Taints to the Ground, by waſhing the Earth off Fallow-lands, on Graſs-lands, and by the Filth they carry down from Hills to Bottoms; therefore, beware of a *Midſummer* Rot, that is the moſt dangerous of all others, for now the Heat of the Weather putrefies the Dungs of Beaſts, dead Inſects, the dead Carcaſes of Animals, and breeds moſt poiſonous *Animalcula*, in ſtanding ſtagnating Waters, which infects the Blood of the Sheep, and often produces the deſtructive Rot; which, to prevent, I have given the World two of the beſt Receipts that ever were put in Practice; but, as the firſt is made with the chargeable Ingredient of Regulus of Antimony, I am ſenſible few, and very few, care to venture on it: Therefore, in my laſt Month, I have furniſhed the Publick with another, that is not only as infallible as the firſt, but is as cheap as that is dear, and which has been duly proved; particularly, in the Caſe of Saving 300 Sheep, from rotting, in that wet Year, 1735, that were fed in a Meadow, joining to the River *Avon*, on which a great Ouzing, of a ſharp Rank Water, deſcended out of an adjacent Hill, ſituated at *Franken*, within three Miles of the *Bath*; and it was here, that that honeſt ſkilful Farmer, Mr. *Clements*, who rents 500 Pound a Year, made Uſe of this ſucceſsful Medicine, that prevented his, when all his Neighbours Flocks died about him rotten. As did two Flocks belonging to one Farmer,

mer, that died by the Rot, between *May* 1735, and *May* 1736, in his Vale Grounds, between *Iwinghoe*, and *Wing*, in *Bucks*, and Multitude of others in that Year.

*A Caution againſt buying rotten Sheep.* Notwithſtanding the ſeveral Items I have given my Readers, in the Months of *April* and *May*, concerning the buying of Sheep, in Order to prevent an Impoſition, by obſerving the Eyes, and the Skin; if all is clear from Cores and Jogs under the Jaws, or if the Wool comes off eaſily on pulling, *&c.* I here add another Caution, and this, becauſe ſeveral Buyers in *Middleſex*, *Hertfordſhire*, and elſewhere, are apt to believe all are ſound, that came out of the Weſt Country; but I aſſure them, they may be miſtaken: For though there are the ſoundeſt of feeding Grounds in moſt of its Parts, yet there are likewiſe great Numbers of low marſhy Meadows, that lie the Length of many Miles from the *Devizes*, and that run by *Lavington*, *Enford*, and down to *Salisbury*. Others, by *Hungerford*, *Newbury*, *Reading*, *Letchlade*, *Wallingford*, *Marlow*, *Cookham*, *Colebrook*, &c. And it is on ſeveral of theſe laſt wet Meadows, and marſh Grounds, that Sheep are kept, which are brought further from the Weſt, to lie 'till a convenient Opportunity happens by Fairs, Markets, or otherways, in the Counties of *Surry*, *Middleſex*, *Bucks*, and *Hertford*, &c. for their Sale: By which Means, if the Sheep were not rotten before, they ſtand a great Chance of rotting here, before they are ſold: And accordingly, I, and many others, have formerly been deceived in the Purchaſe of ſome of theſe, to our great Loſs. Therefore take Care even of the Weſt-country Sort, as well as all others; and, where you can, get them warranted ſound before good Witneſſes, or better by Writing, under the Seller's Hand; that, in Caſe any of them die rotten by ſuch a Time, he will make the Damage

mage good to you; this is commonly done, where many are bought at once, and when the Seaſon of the Year, and the Place the Sheep came from, gives the Buyer juſt Reaſon to ſuſpect their Soundneſs.

*Ewes, that bring Twin-lambs:* Theſe generally prove beneficial to ſuckling Farmers, for here, I will ſuppoſe, they never want a full Feed, to furniſh a ſufficient Quantity of Milk to the Ewe, for maintaining the Twins, and fattening them in due Time; or, if the Dam can't, the Aliens may. A Farmer, near *Edgware*, told me, he had four Lambs a Year, from one Ewe, for ſeveral Years together two at a Time at two Lambings; and once the ſame Ewe brought him three; but the odd Lamb he took intirely from her, that ſhe might the better fat the others. A Farmer at *Wards*, near *Iſvinghoe*, had a Ewe that commonly brought him three Lambs at a Time, and ſometimes four, about *Chriſtmas*, and maintained the three well, for as he was a Plough-Farmer, and did not ſuckle Houſe-lambs, he uſually put them into his green Wheat, where the Ewe got a plentiful Living. Now to come by a true twin Ewe-lamb for Breeding, is to ſave one of the two that is Male and Female; one ſuch will bring only one Lamb the firſt Time, but Twins generally afterwards, for many Years, as a Neighbour's of mine does, that is fourteen Years old, who yet hopes to have twin Lambs next Year again from her; but this is not a ſuckling Farmer. Twin Ewes are ſold at *Wayhill*, *Heley*, and *Woodcot* Fairs, in the Weſt.

*A Deſcription of a right Sort of Ram, to get white Lambs-fleſh.* This Article is not of the leaſt Importance in the Buſineſs of ſuckling Houſe-Lambs; but is a Matter that is taken a great deal of Care off, by moſt of this Sort of Farmers in particular; becauſe, on this, very much depends the having of ſuch Lambs as generally have more

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and whiter Fleſh, than theſe got by Rams, that are of a wrong Sort for this Purpoſe; therefore I ſhall here give you a Deſcription of ſuch a one, that is moſt likely to anſwer this beneficial End. He ought to be ſo wide between the Tops of his Shoulders, that you may almoſt lay your Hand there; alſo wide-loined, pole-headed, large and white-limbed, white-faced, white-bellied, white-clawed or hoofed, and that has a white Noſe, and ſtrong thick Dock, or Tail; and in ſhort, he ſhould be one that is all over white, for the Colour, as well as the Shape and Bigneſs, is one main Part of the Matter. And for this Purpoſe, a right Ram, at two Years old, has been ſold for thirty, forty, or more Shillings. On this Account, it is, that when a ſuckling Farmer finds himſelf Maſter of a Ram-lamb, that is likely to anſwer this great End, he ſaves him with a great deal of Care, by not letting him come among Ewes, 'till he is two Years old, leſt it ſtunt its Growth, and then ſuffers only one Ram, to about fifty Ewes; if there are a conſiderable Number more, he keeps two in two Flocks, for they muſt not go together, leſt they ſpoil one another; and when he is five Years old, he is to be knit, as I ſaid before, and fatted off; for, if he is kept longer, it is a Chance if he does not turn unſufferably miſchievous, by Butting all Strangers eſpecially, he can come at. Again, ſuch a true Sort of Ram ſhould be one that is lambed forward, for, if he be lambed late, it will prove a Diſadvantage to his Growth. Be ſure you never make Choice of a Ram that is pecked-arſed, for ſuch a one, for ſeveral Reaſons, ought to be refuſed.

*A further Account of ſuckling Houſe-lambs by the Plough-Farmer.* Suckling Ewes ſhould be often ſhifted into freſh Bites of Graſs, leſt they ſtrain it to their Prejudice; the like in Turneps: And

in Winter, a careful Farmer obſerves to give the Ewes Hay in Racks, in the Field, to ſupport their Suckling, and prevent their taking the Water-Rot; and ſo careful are ſome, that they will, every Winter dark Night, viſit their Flocks in the Field, and ſee they have Hay enough, and are in Health. And a Plough-farmer has this Advantage of a Meadow-farmer: In Caſe an Ewe has but very little Milk, he can turn her out, and fold her among his Store-ſheep; where ſhe may take Ram beſides, and come in again for ſuckling Houſe-lambs.

*The Concluſion of this Chapter.* I ſhould here have given you an Account of four ſeveral Ways to force Ewes to take Ram, when a Perſon will: One of which is, to have it performed, without giving the Creature any Ingredient, ſo that twenty, forty, or more Ewes may be made to take Ram in half an Hour's Time, with hardly any Coſt at all; by which, I ſaid, not only many great Cities and Towns may be ſupplied, that never were, with this dainty Food; but theſe moſt valuable Beaſts may alſo be bred in greater Numbers, than ever has been, to the immenſe Benefit of this our *Britain* and *Ireland*; but, as I am cramped for Room, in this Monthly Book, I ſhall defer it 'till the next, at furtheſt; and then in *July*, I am reſolved to oblige the World with this great Secret, for which, if it anſwers my Character as I am ſure it will, I hope the Public will encourage me, by a reaſonable Gratuity, for the great Expence and Trouble I have been at in travelling, to diſcover and find out this, and many other ſerviceable Matters, in this noble and moſt uſeful Science.

CHAP.

## CHAP. XII.

## *Of* SHEEP.

*Sheering Sheep early.* Early in this Month, we generally ſheer our Sheep; and in order to do this, we have them waſhed at the River for Sixpence a Score, and our Lambs at three Pence. Then, if the Weather is fair, we let them feed the ſame Night on the Common, or in a Field; but, if wettiſh, we houſe them, and ſheer them the next Day. Our Price, at *Gaddeſden*, is one Shilling a Day and Victuals, to each Sheerer; and, if he is a good Workman, he will ſheer thirty-four ſmall Sheep, or thirty larger, in one Day. But, if we pay him by the Score without Victuals, it is eighteen Pence for Sheep, and twelve Pence for Lambs. If they are cut in Sheering (as they often are) apply Tar to the Wound, and it will keep off the Fly, and heal it.

*Sheering Sheep late.* A Neighbour of mine, that had been an old Sheep-dealer, and now a ſmall Farmer, though he let his Sheep lie moſtly on *Ivinghoe* Common, the Summer 1739, yet they got very poor, becauſe they ſuffered very much, by being ſhorn ſo late as *Midſummer*; which gave the *Midſummer* Fly an Opportunity to eat, and blow their Skins, ſo as to breed the Maggot, which gauled them in ſeveral Parts of their Bodies, and made them pine away: For which Reaſon, he took a Reſolution, never to exceed the latter End of *May*, or Beginning of *June*, becauſe the young Wool will then grow faſt enough to guard the Skin againſt the pernicious *Midſummer* Fly. Others, that were folding Sheep, were ſo attacked after their Sheering with the Flies, that,

to allay the Itching which they cauſed, they ſcratched their Heads ſore.

*How to prevent the Damage of Rains, and keep Sheep from catching Cold after Sheering.* Sheep, preſently after Sheering, are ſometimes expoſed to cold Winds and Rains, that often prove fatal to them, eſpecially in the Northern Parts of *England*; inſomuch that many Farmers, by their Obſtinacy and Ignorance, have loſt great Numbers of theſe valuable Creatures, and all for the Want of the Way of managing them, that I know ſome have heard of, and yet regard it no more than a fabulous Story, as they do in many other Matters, that are out of their common Practice: However, all are not ſo; for there are others, who live near the Sea-ſide, who immediately after Sheering, plunge their Sheep into the Salt-water. Or, if a Perſon lives at too great a Diſtance from ſuch Conveniency, they may mix Salt with freſh Water, and waſh a Sheep all over (but better if made Blood-warm) for ſuch ſalt Water, being of a very ſearching Nature, will enter the porous Skin of this Animal, and defend him from the Miſchiefs they are liable to fall under; as Gripes, Cholicks, corrupted Blood, Fevers, Scab, Red-water, Rot, *&c.* will bring on an early, full Fleece of Wool, warm and harden their Skin, which certainly is the holloweſt and moſt porous of all Beaſts whatſoever, purify their Blood, and very much ſecure their Preſervation all the Year after. But this Practice is ſo rarely made Uſe of, that I do not know one Farmer in our inland Country that does it, beſides myſelf. In the Country contiguous to *Rocheſter* and *Chetham*, they make Uſe of the Salt Water in their River, as many others do for this Purpoſe.

*To cure Sheep when hurt by the Fly, Maggot, Ticks, or Sheep Lice*, &c. If the Fly, Dar, or Horſe-Bee,

Bee, ſhould happen to blow your Sheep, and breed Maggots at the Bottom of their Horns, or in any other Part, as is uſual at this Time of Year; and, by their Rubbing and Scratching the Place with their Feet, make it ſore and raw; which, when the Maggots are in great Numbers, and let alone, they will kill the Creature, by eating into ſome Part of its Body: I ſay, to prevent this, take Tar, Train-oil, and Greaſe, equal Parts; mix them together ſcalding hot, and while it is ſo, apply it to the Place. But, if you will have a cold Remedy, mix Tar, Train-oil, Salt, and Flour of Brimſtone together. The Salt allays the Itching, the Brimſtone keeps off the Fly, and the Tar and Train oil heal, and likewiſe keep off the Fly. But be ſure not to add the Brimſtone, if the Medicine is to be put on any Part of the Sheep's Head; for I knew a Farmer do it, and it run down into the Eyes of the Creatures, and blinded ſeveral, and thoſe, that eſcaped this, fretted themſelves to a very great Degree, by the Pain it cauſed; for which Reaſon, ſome Shepherds will boil Pitch, Tar, Seam, and Salt together, and anoint their Heads. If your Sheep, or Lamb, happens to be ſcabby, when ſhorn, take ſome Butter-milk, or, for Want of that, common Milk, mix it with Salt, and rub the Beaſt all over with it. If your Sheep are poor, they are the more ſubject to have Ticks, or Sheep-lice: For this, ſheer early, and it clears them.

*Of applying the Pitch Brand-Mark injudiciouſly.* This has too often happened, and very much damaged the Sheep. Our Mixture, for this Purpoſe, is Pitch, and a little Greaſe, heated 'till all is of a thin Conſiſtence; but, if we can get Comb enough from the Cart-wheel, we chuſe it before Greaſe, becauſe it will make a blacker Mark, and laſt longer. If this be heated, and applied too hot,

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it will burn the Skin, as has been proved, when the Brand has been ſeen on the Inſide of the Skin, after the Sheep has been killed: Therefore ſome will mark them with only Redding, immediately after they are ſhorn, and not pitch-brand them 'till a Month after, that there may be Wool enough grown to prevent this Damage.

## CHAP. XIII.

### *The Nature of ſeveral Sorts of Wools.*

THE Herefordſhire *Wool.* On the *Licky* Hills, and about *Lempſter*, their Wool is reckoned the fineſt in *England*, and is one of the chief Perfections of this County. Here they commonly tod twenty-ſix, or more Fleeces, which with a Mixture of *Spaniſh* Wool, makes the ſuperfine Broad-Cloths at *Cirenceſter*, and other Places in *Glouceſterſhire*.

*Weſt-country Wool.* This tods eight or nine Fleeces, and is thought to be the next beſt to *Lempſter* Wool, as is that alſo off the South Downs in *Suſſex*. A middling Weſtern Ewe, that was fed in *Hertfordſhire*, cut three Pounds, and three Pounds and a half, the firſt four Years ſhe lived here; after that, ſhe declined in Quantity, 'till ſhe was fifteen Years old, and then ſhe returned a Fleece of only one Pound and a half. A Weſtern Sheep, brought into our Parts at three Years old, cuts better Wool the firſt Year, then ſhe will ever after; becauſe the ſhort Graſs, that grows on their dry, large, open Downs, is much ſweeter than ours in *Hertfordſhire*. There are ſome Weſtern Sheep that cut four Pounds of Wool each, that is ſo thick and curled, that, if a Pail of Water is thrown over it, it will nearly run all off preſently; and,

and, when Wool grows in this Manner, it is commonly very fine. The *Maiden* Downs, near *Saliſbury*, have a Wool worth a Guinea a Tod, when ours in *Hertfordſhire* is worth but half as much.

Buckingham *and* Hertfordſhire *Wools*, *&c.* In Parts of the Vale of *Aylesbury*, by the delicate Feeding and Folding their Sheep in open, airy Fields, their Wool ſells for three Shillings a Tod more, than ours in *Hertfordſhire*; becauſe their Commons have a moſt rich Bottom, clear of every Thing, but a pure Graſs, that is impregnated with ſuch a ſpirituous Sap, as will fat a Beaſt on the ſhorteſt Bite, in the drieſt Summer, provided it can come at Water enough; which is what we cannot ſay by ours in *Hertfordſhire*, becauſe moſt of our Commons have Furz, Fern, and Heath or Ling growing on them, by which, and the Bite of the Hedge-leaves, and Folding our Sheep in incloſed Fields, our Wools acquire a coarſe Nature, but not ſo coarſe as the *Norfolk*, where their ſandy Soils, and foul Commons, are the Cauſe thereof.

Leiceſterſhire *Wool.* Often Tods are four, five, or ſix Fleeces. It is a heavy, cloddy Wool, as thick at Top as at Bottom, and is good for making Callimancoes, Shalloons, Yarn, and Stockings.

Lincolnſhire *Wool.* This rather out-does *Leiceſterſhire*, in the Weight of the Fleeces. Their great Sheep have their Belly and Legs almoſt naked; and as they are the largeſt of Sheep, for being fed in ſalt and freſh Marſhes, their Fleſh is more ſpungy than that fed on a ſhorter Bite; yet it may be called good Mutton, and does conſiderable Service, by ſupplying the *London* Markets in great Quantities, and thereby keeping down the Price of others. This Wool is a very long, coarſe, ſpiry Sort, not ſo thick at Bottom as at Top, that

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ſerves to work into Baiz, Says, *&c.* at *Colcheſter*, *Brocking*, *Braintree*, and other Places.

Welch *and* Scotch *Wools*. Are accounted the worſt of all the *Britiſh* Sorts, becauſe theſe have a coarſe Top, and a hairy Bottom; its middle Part is ſerviceable for making ordinary *Yorkſhire* Cloaths, that are ſold from twenty Pence, to thirty Pence a Yard; but their ſmall Mutton, when fatted at a right Age in ſweet Graſs, is fine. A Sheep, from three to ſeven Years old, ſheers more Wool than before, or after them Ages.

Dutch *Sheep*, being a very large Sort, often bring two or three Lambs at a Time: But their Wool is coarſe.

Turkey *Sheep*, have a large heavy Tail, and, from their groſs Feeding, a coarſe Fleſh, and a rough hairy Wool; and the worſe, becauſe, in their hot Country, they often breed by Goats.

*The Value of Wool*. In ſome Places, it is ſaid, they never waſh their Sheep; but ſheer them as they be, and that for this Reaſon; becauſe the natural Oil or Greaſe in the ſame helps to yoke (as they call it) or make it mix with *Iriſh*, or other waſhed Wool, in ſuch a Manner, as beſt fits it for making Sagathies, Duroys, Serges, Druggets, and ſuch fine Stuffs. The beſt Spinners in *England* are thought to live about *Canterbury*, where they ſpin after the *French* Way, with a Diſtaff, which invites ſome to ſend their Jerſey from *London* thither; and when it is returned back in fine Worſted, they weave it into Stockings, and other woollen Manufactures. One Pound of ſuch Wool may be worked, in Value, to near thirty Shillings. A ſuperfine four-thread Pair of Stockings, weighing but ſix Ounces, has been ſold for twelve Shillings.

*How Wool is clandeſtinely run to* France. A Farmer, near *Canterbury*, became ſo proſperous, that he

he deemed himſelf worth a thouſand Pounds, and being a Widower, married a Widow, reputed to be worth as much: But the Lottery came up a fatal Blank to the Man, for ſhe proved to be worſe than nothing, by a thouſand Pounds, and thus beggared the Farmer. Upon this, Governor *Denew*, and ſome Country Gentlemen in his Neighbourhood, got him Bread, by placing him a Gunner and Suttler of *Warner* Caſtle, near *Deal*; but here he did not live long, before another ruinous Accident happened, and that was thus: A Perſon having attempted to run a Bag of the fineſt Wool from the *Kentiſh* Shore, to *France*, by ſome Means was diſappointed, and forced to travel with it at Noon-day, and, being hard put to it, thought of this Stratagem to deliver himſelf: He made what Haſte he could to the Caſtle, and there, knocking at the Gate, was aſked what he wanted; he ſaid, that his Horſe could go no further, therefore begged that a Bag of Jerſey might be lodged in a ſecure Place from Wet, and he would pay him well for it, and fetch it away on the Morrow; but, inſtead of this, he immediately lodges an Information at the *Cuſtom-houſe* at *Deal*, which cauſed the innocent Man (that, as he declared, was then ignorant of the Word *Jerſey*) to be ſent to Priſon, to be tried for his Life, for it was Death by the Law, to have ſuch Goods in that Manner in his Cuſtody: However, the Gentlemen, his old Friends, took Pity, and ventured to diſcharge him, without any Trial. Now this Sort of Villains are thoſe who get the fineſt of Wool, by Degrees, ſo near the Sea-ſide, as to whip it thither in a few Hours Time; and knowing very near the Place, by Letters before-hand, from *Calais*, *Bullein*, *Diep*, or other Parts of *France*: they lie ready in a dark Night, to perceive a Fire

ſtruck by a Flint and Steel, in a Boat, by *Frenchmen*, which being ſeen by our Wool-runners, they anſwer it with the ſame Sign, and then directly meet, and match their indented Cards, which prove them Friends, and then the Packs of Wool are delivered for *French* Gold, or valuable Goods. Now I would have this Account ſerve as an Item to the Government, to have a ſufficient ſtrict Watch kept, for, by their Attendance along the Sea-ſhore of *Eſſex*, *Kent*, and other Parts, they may greatly prevent the Running of Wool, Tea, Brandy, and many other Commodities. I could give a larger Account of theſe Matters, as I have done of ſome others, to the Advantage of the Publick, but my Opportunity here will not give me Leave.

*Of Lambs-wool*, &c. Lambs-wool is valuable for ſeveral Uſes; for this makes Felt-hats in *Worceſterſhire*, and other Parts; ſerves to quilt Petticoats, and fill coarſe Ticks for Bedding inſtead of Flocks; as the *Spaniſh* Wool that is but an Inch and a half long, with the Help of Beaver-fur mixed with it, does in making Beaver-hats.

*Weaning Graſs-lambs.* At Sheering Time, we commonly wean thoſe Lambs deſigned to be kept for Store-ſheep, as being alſo much better for the Ewes, as they are by this Means to become dry, will take Ram the ſooner, and be ſtronger and better enabled to endure the Severities of cold, wet, winter Seaſons. Others will wean their Lambs *in May*, and turn them directly into good Graſs, or among their Oats, where the Lambs will eat up Weeds, and do the Grain Service. Others will turn their Sheep and Lambs together among their Beans, to remain 'till Bloſſom-time, for the ſame Purpoſe. But this Memorandum of weaning Lambs is needleſs, where a Farmer is obliged to make

make Uſe of his Lambs to fill up a Fold, as too many of us Farmers are, through Neceſſity, and then the Lambs are commonly ſtunted.

*Driving Sheep.* In the wet Summer, 1735, ſeveral brave ſound Flocks were ſeized with the Scab, occaſioned by the frequent Rains, and driving them from Commons and Fields, to the Fold, in great Numbers, through narrow Lanes, whereby they heated and ſurfeited themſelves; for by being hot, by driving, and then lying very thick together in the Fold, with wet Skins, they got this Diſtemper, which killed many, and others it cauſed their Wool to peel off. The Cure I have before ſet down.

*The following Account is the Heads of a Scheme, publiſhed for the Improvement of our Woollen Manufacture,* viz.

THE Pamphlet, wrote on this Subject, was printed in *London*, in *February*, 1736-7, and intitled, *The Golden Fleece*; ſetting forth, that the native Merchandize of *England*, is Wool, Butter, Tallow, Tin, Lead, and Iron; and one of the chiefeſt Funds, is Wool; and ſo it is to Foreigners, by the illegal Exportation of it from *Britain* and *Ireland*, and which employs many Thouſands of Wool-combers, Clothiers, Spinners, Dyers and others. Now becauſe the foreign Wools is coarſe and hairy, they cannot make ſo many Sorts of it, without the Help of *Britiſh* Wool, as are fit to make broad and narrow Cloths, Druggets, Serges, Sagathies, Camlets, Callimancoes, Ratteens, Shalloons, Durants, Long-ells, Boſlies, Poplins, Flannels, Stockings, Crapes, Caps, and Stuffs. And as the *Spaniſh* Wool, that is ſo exceeding fine and ſhort, that it cannot be manu-

factured without coarſe Wool, nor them mixed without the Help of *Britiſh* and *Iriſh*: Therefore, if our Wool was not exported, it would improve our own Trade, and ſpoil the Foreign, and thereby increaſe the Number of Workmen, who greatly conſume the Produce of the Land, and, by this, ſupport the Farmer, and enrich the Gentleman; for it is theſe that improve Wool, to ſix Times its Value. One Pack of *Britiſh*, or *Iriſh* Wool, will work up two Packs of Foreign coarſe, which elſe would lie on their Hands, in Reſpect to their Trade with *Turkey*, *Spain*, *Portugal*, &c. It may perhaps ſeem a Paradox to ſome People, 'till rightly underſtood, that, the more unwrought Wool we ſuffer to be exported, the more we ſhall be over-ſtocked at Home. For Example, ſuppoſe 150,000 Packs of Wool (being but half what is thought to be ſent over every Year from us, and *Ireland*) ſhould be ſent away unwrought; theſe, added to 300,000 Packs of Foreign, produce a Manufacture of 450,000. If then 150,000 were kept at Home, *Turkey*, *Spain*, *Portugal*, &c. would want from us the Manufacture of 450,000, in the Room of the like Quantity furniſhed by neighbouring Nations, who, in this Caſe, would have no manufactured Goods to ſend to foreign Markets. Again, to keep the *Iriſh* from exporting their's, we ought to take their Over-ſtock; then all the Manufacture would be to ourſelves, without any Chance of being rivalled, and ſo make our Price Abroad, as the *Hollanders* do their Spices, employ many Thouſands more than we do, and enrich the Nation in the Export of their Labour; for, by what Means ſoever Trade is improved or decayed, the Value of Land will infallibly riſe or fall. The Number of Taxes makes our working Manufacture dearer, by twenty-*five* or thirty *per Cent*, than in any other Kingdom;

ſo

ſo that, if Foreigners had the ſame Wool and Labour five *per Cent.* dearer, than that of foreign Countries, our Merchants could not find a Vent at foreign Markets. Foreigners purchaſe none but our longeſt and beſt Combing-Wool, not any of the coarſer or worſer Sort; which the more adds to the Guilt of thoſe Pyrates, who wallow in Wealth and Plenty, at the Expence and Ruin of their native Country, in Defiance of the Laws of God and Man.

*Great-Britain*, by its Product, is capable to extend its Trade beyond all other Nations, and maintain it, by being Maſters of the Seas. Therefore, if we ſtill ſuffer this fatal Exportation, the great Produce of Labour and Induſtry (of more Value than the whole Lands of the Nation) will be loſt.

*Though* Jaſon's *Fleece was fam'd of old,*
*The* Britiſh *Wool is growing Gold.*
*No Mines can more of Wealth ſupply,*
*And takes for Kings the* Tyrian *Dye.* Dryden.

One Pack of Wool, made into Broad-cloth, will employ fifty-eight Perſons for one Week, who will earn nineteen Pounds eight Shillings. One Pack of long Combing-Wool, in fine Stuffs, Serges, Sagathies, Camblets, *&c.* 158 Perſons in one Week, thirty-three Pounds twelve Shillings. One Pack of Wool in Stockings, *&c.* 150 Perſons one Week, fifty-five Pounds. In the Whole, 366 Perſons, in one Week, will earn one Hundred and eight Pounds in employing three Packs of Wool.

It is computed, that *Great-Britain* produces, yearly, 500,000 Packs of Wool, and *Ireland* 300,000, at 240 Pounds Weight each, in all 800,000: Out of which, allow, for Home Conſumption in *Ireland*, 100,000 Packs; then remains, wrought up in *Great-Britain*, 700,000. Therefore,

fore, by ſecuring of our's, and the *Iriſh* Wool at Home, we ſhall greatly impoveriſh foreign Nations, and acquire more Riches by it, than if we were to have the Mines of *Peru* and *Mexico*. And, in Order to do this, the Regiſtering of all Wool is propoſed by the Author, who ſays, ſuch a Method, and a good Look-out at Sea, will effectually anſwer the Purpoſe. But there has ſince been an Anſwer publiſhed, in 1741, intitled, *Remarks upon Mr.* Webber's *Scheme, and the* Draper's *Pamphlet*: In which the Author endeavours to prove, that Mr. *Webber*'s Notion of Regiſtering Wool, will not anſwer the Deſign, becauſe the Charge of great Numbers of Officers, to effect the ſame, would invalidate the Project. Not that he would have it inferred from hence, as if he was of Opinion, that our Wool from *England* and *Ireland* was not clandeſtinely exported in great Quantities into foreign Parts; he ſays, he is fully perſuaded it is, and that other Nations, and, in particular, the *French*, are enabled by working up their coarſe Wool, with that of *England* and *Ireland*, to trade, and even underſel us at ſome Markets Abroad, in a Variety of ſmall Stuffs, where we formerly had the Vent of theſe Commodities; for which Reaſon, he ſays, there is a Neceſſity, that ſome Law, more effectual than any now in being, ſhould be made, in order to put an End to a Practice ſo pernicious to this Country. There is nothing in the World more deſirable; and he farther ſays, that he will venture to affirm, Nobody wiſhes it more than he does: Nay, he goes ſo far, as to declare, that a Regiſter is the moſt likely Means to prevent the Exportation of our Wool to foreign Parts, if it can be perfectly put in Execution, both in *England* and *Ireland*; but then it muſt not be, he ſays, a Regiſter that ſets out with the Load of 6 or 700,000 Pounds on the Land and Trade of this Kingdom,

and

and innumerable other grievous and deſtructive Circumſtances, as in Page 31. In ſhort, there are many *Pro's* and *Con's* argued, by Authors of Pamphlets on the Woollen Manufacture Buſineſs, as being the moſt beneficial and extenſive of all the Manufactures of this Kingdom: But as their particular Diſputes are too long to inſert for my preſent Purpoſe, I refer my Readers to the ſeveral Caſes related in the ſame, as believing all the three very ingenious Authors have their Country's Welfare truly at Heart; as appears by their aſſiduous Pains to prevent the horrid and moſt deſtructive Practice of running our beſt Wool to foreign Countries. And here I have to obſerve, that, in the *Northampton Mercury* of the firſt of *February* 1741, it is ſaid, that, the Prohibition of Importing *Spaniſh* Wool has advanced the Price of fine *Engliſh* Wool Six-pence *per* Pound, and increaſed its Conſumption.

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## CHAP. XIII.

### *Of Cows and Calves.*

*THE Character and Improvement of the* Welch *Cow and* Welch *and* Scotch *Runts.* Theſe are the ſmalleſt black Sort bred in *Great-Britain*, but, of their Size, the ſtrongeſt and hardieſt of all others, as coming off mountainous and other barren Grounds. Some of the *Welch* Cows will give as much Milk, as ſome of the larger *Engliſh* Sort, and then it is good Huſbandry to keep ſuch, and propagate their Breed by an *Engliſh* Bull. Many of theſe are hardly ever dry, and will milk on ſhort Graſs, when others, the larger Beaſts, are almoſt ſtarved, and give little or none. Theſe good Properties have tempted ſeveral of late to keep only

only the *Welch* Cow for ſuckling and fatting of Calves on them, throughout the Year, for *Smithfield* Market, and find them anſwer beyond others. In Winter alſo, they will eat a coarſer Food, than the larger Cow, and which, with the Help of a few Grains, Turneps, or wetted Malt-duſt, *&c.* will make her continue her Milk 'till near Calving-Time; and thus enable their Owners to carry on the Suckling Buſineſs, 'till Graſs come again, to a conſiderable Profit. Thus alſo are both the *Welch* and *Scotch* Runts, or Oxen, no leſs valuable for their Feeding and Fattening, almoſt like a Sheep, on Turneps, in the Field, or Houſe. This has capacitated many of the *Norfolk* and *Suffolk* Farmers to improve their poor ſandy Lands, of late Years, to a very great Degree, as appears by the vaſt Numbers of fat Cattle, that are frequently ſent to *Smithfield:* Beſides which, their unctuous, looſe, cool Dung and Urine agree ſo well with their hot, burning, dry Sands, as to become a good Dreſſing, for a ſucceeding Crop of Barley, which, in ſome of theſe Farms, is all, or moſtly, employed in feeding Geeſe and Turkies, that, in *September*, are drove and brought up to *London*, and other Parts. The ſmall *Welch* Cow, if ſhe is a good one, is allowed to yield four Quarts of Milk a Day throughout the Year, reckoning the Quantities, ſhe gives at firſt, againſt the laſt, provided ſhe has full Keeping, which exceeds the Meals of ſome larger red Cows, conſidering how ſoon the latter are dry, before the former; and though ſome may object, that the Calf of the *Welch* Cow muſt ſuffer by its giving Milk ſo long, yet others are of a contrary Opinion, and believe the Cow gives no more Milk, than what can be ſpared from the Nouriſhment of the Calf. Some again will ſay, that their little Carcaſe, when fatted, will fetch but a Trifle; but this is alſo frivolous, if we conſider the ſmall

Price

Price the *Welch* Cow coſts at firſt, the little Meat that fats her, and the ſhort Time ſhe is fitting for the Market; as the Eaſtern Farmers find by their Turnep-feeding, to their great Profit every Year. The *Welch* Cow may be ſaid to be the beſt of any for the poor Man's Advantage, who has only a Cottage, and the Right of a Common; for this Creature will live and milk under the Feed of young, green Furz, Fern, Goſs, or Broom, with the Help of the ſhort Graſs that grows between.—One Mr. *Hayton*, a Tallow-Chandler, who lived in *Leather-lane*, by *Holbourn*, *London*, having only two Houſes, with their Orchards, at *Fritheſden*, near *Berkhamſtead*, in *Hertfordſhire*, by which he had a Right to the unlimited Common belonging to the ſame, kept a large Number of *Welch* Cows on it (as he thought, with Calf) and let them run on the ſame 'till they calved, and then ſold them with a Calf by their Side; and thoſe, that did not prove with Calf, he kept on, either by the Common, or Straw at Home, 'till they took Bull and calved, for the ſame Purpoſe; for there is hardly any ſuch Thing, as being ſure they are with Calf in *Auguſt*, when they are brought up and ſold in our Parts.

*The red* Engliſh *Cow*, is now moſtly approved of, and kept by both Vale and *Chilturn* Farmers for the Dairy, becauſe theſe are commonly of a large Size, give the greateſt Quantities of Milk in the leaſt Time, and that which is thought to be the moſt nouriſhing, as being repleniſhed with more lively Juices than others. This Colour is alſo ſo much regarded in Swine, that the red or ſandy Breed is preferred, in *Berkſhire*, to all others; and has made the *Hertfordſhire* Farmer of late get into their Breed, for the Sake of their Gentleneſs, good Grazing, and kind Fatting; but, I ſuppoſe, this ſwiniſh Opinion will not laſt long, becauſe they are generally found to have very

thick Skins. The red Cow and Ox are in ſo much Eſteem in the Weſt, that, at *Bridgewater* great Fair, in 1737, I ſaw none but this Colour. The red Cow is ſaid to bring a better Calf, than the black, becauſe the red ones go dry ſooner than the black, and then all the Juices of the Body are converted to its Nouriſhment. The Hair of the red is accounted ſtronger than that of the black; and why the black is preferred for ſuckling Calves, before the red, is, becauſe, about *January*, or *February*, the red is apt to be near dry, that took Bull in *June* or *July*; for in Winter, and in the Spring-months, the Milk is moſt valuable for Suckling, on Account of the greater Price the Calf then fetches. So the red Cow is moſt ſerviceable for the Dairy, in giving the greateſt Quantity of Milk in the Time of high Graſs; which affords thoſe Farmers in particular a profitable Opportunity, who pay their Rents by barrelling up Butter. But, of all the Cows in *England*, I think none comes up to the *Holderneſs* Breed, for their wide Bags, ſhort Horns, and large Bodies, which render 'em (whether black, or red) the moſt profitable Beaſts for the Dairy-man, Grazier, and Butcher. Some of theſe have yielded two or three Gallons at a Meal, when others give only half as much; but then, as the great red Cow is commonly ſooner dry, the Amends, by ſome, is accounted more than made by the Duration of the leſſer, black *Welch*'s Cow's Milk: For which Reaſon, as I have before obſerved, the *Welch* black Cow is the beſt for ſuckling Calves, and the *Engliſh* red Cow for the Dairy; though, by the Way, this ought to be taken Notice of, that, where proper Food is in the greateſt Plenty, there both red and black, great and ſmall Cows will milk longer, than where a ſhorter Subſiſtence is allowed them.

*The*

*The white Cow.* As this Sort are not kept in great Numbers, I ſhall ſay no more, than that they are reckoned the tendereſt Sort, go dry a good while, and, as they are pretty large, they require a longer Bite of Graſs, than many have to give them. Theſe great *Dutch*, or *Flanders* Cows (for from theſe the white Breed generally came firſt) are ſeldom kept, but by Gentlemen who can beſt afford them Meat enough, and content themſelves with the Sight of a fine Cow. When this Breed is mixed with ſome of the beſt of our *Engliſh*, I have known them to give a great deal of Milk. I once had a Heifer that I bred from a *Dutch* white Cow, that I ſold for four Guineas, a *Dunſtable* Fair, in her ſecond Year, which proved the beſt Milch-cow in the Country. Another I ſold to a Gentleman Farmer, who, after having kept this large white Beaſt ſeveral Years, at laſt loſt her, by Means of her drinking Waſh, and eating Grains out of a Hog-tub, which brought on her a Scouring and Rot that killed her.

*The dun Cow.* I know a Gentleman, at this Time, that keeps the dun Breed, as a Rarity, for their particular Colour, ſmall Size, and their being polled, or without Horns: Theſe are of the *Scotch* Kind, will live on a ſhort Bite, and milk better than ſome others of the ſame Bigneſs. As they are hornleſs, they, conſequently, will fat with leſſer Meat, than the horned Sort; and, though the Bull has little, dub, ſhort Horns (and the Cows none) yet they are ſo ſmall, that it is out of his Power to do Miſchief with them; and thereby the Owner may depend on being free from the Danger of being inſtrumental in ſhedding Man's Blood, which too many have brought themſelves under, by obſtinately keeping a horned Bull, that they knew before to be unlucky.

*The pyed, yellowiſh, and blue Cow.* Of the blue Sort I ſaw ſome in *Norfolk*, that made a pretty Show in the Field; but I could ſee nothing elſe, beſides their particular fine Colour to recommend them, any more than the yellowiſh or pyed Sorts. In buying a Cow, and Calf by her Side, take Care you are not bit, as a Cow-keeper of my Acquaintance was, who, being in a Fair, aſked the Price of a Cow that had a Calf with it; and, it being agreed on, and the Money paid, the Buyer was driving away both Cow and Calf, but the Seller obliged him to take only the Cow, ſaying, there was no Mention made of the Calf.

*The Caſe of a Cow that fell in Calving.* This is a Misfortune that happens to many, inſomuch that a Cow-doctor, near *Dunſtable*, had twenty fell in one Year, that he was called to; but, to be particular, I ſhall here relate the Caſe of one that fell in *April*, 1736, *viz.* It was a Home-bred Cow, that was kept in the Houſe all Winter, and ſo well, that ſhe was half Beef, which occaſioned her ſuch a large Bag, as obliged the Farmer to milk her two Days before ſhe calved; and about the twenty-ſixth Day ſhe calved, when, being fine Weather, ſhe was turned out the ſame Day to graze; which was wrong done, for at Night ſhe fell, ſo that ſhe could not get up, 'till raiſed with a Sack put under her Belly. On this, they applied to a Cow-doctor (as they call him) who ſent a Quart of Drink, that he charged a Crown for, loaded very much with Muſtard-ſeed: This was given, with Orders every two Hours to give the Cow a Quart of ground Malt, ſcalded like a Maſh, and this all the Night long. By Morning ſhe got up, and did well. At firſt the Doctor aſked her Age, and was told ſhe was five Years old; but he ſaid, he was ſure ſhe was ſix or ſeven, for that none fall before ſix. Now this Misfortune was imputed

to

to two Cauſes; one to not bleeding before Calving, which, he ſaid, once or twice doing would have prevented the Diſaſter: The other to the Cow's being over fed, which made her ſo fat and unweildy, as to hinder her getting up; two Qualities that the leaner Cows are free from; for their Blood is ſeldom too rank, nor the Burden of their Bodies too great, and therefore they ſeldom, or never, fall. The Doctor ordered the Meſſenger to bleed this Cow, as ſoon as ever he came Home; and accordingly they took from her three Pints of Blood, which, with the ſeveral Applications of Malt, made her riſe and recover the next Day. Others, when a Cow thus falls in Calving, have given her a Pint of Gin, and it has fully anſwered the Intent. —— The Cow, that is neither too fat, nor too lean, is generally the freeſt from this Diſtemper.

*How a Cow was cured of a Garget in her Bag.* A Perſon put ſome Chamberlye, of three Days old, with ſome Flour of Brimſtone mixed with it, into a Horn, and gave it her; which had the good Effect as to cure her, with the Help of an outward Application, uſed at the ſame Time, made with the Juice of Elder-leaves boiled up in Hogs-lard, and rubbed ſeveral Times well in. The gargety Humour commonly appears firſt in a Redneſs of the Bag, which cauſes it to be knotty; and, if not cured here, it will next take the Cow's Guts, and then it generally kills her.

*To cure a Swelling in a Cow, or other Beaſt.* Fry Cow-dung and Hogs-lard together, and lay it on hot; but this ought to be Graſs-dung, and not that made from Hay or Straw: Some will mix Horſe-turpentine with it.

*A Cow that piſſes Blood.* Mix ſome Tar with Soot in Water, a Pint in all, and give it in a Horn three

three or four Mornings together: It cured one of this Diſtemper, while it went to Graſs.

*A ſecond.* An eminent Farmer near me gave an Ounce of Coral-powder in Ale, for a Week together, once a Day, and it cured the Cow. Here may be an Objection againſt the Dearneſs of the Remedy; but this is cheaper than moſt imagine, if it is bought in a right Place: The Druggiſt and Apothecary ſell it.

*What will cauſe a ſuckling Calf to have red Fleſh.* If a Cow feeds on Thetches, either green or dry, the Calf's Fleſh will be red. A Woman-farmer, at *Eaton* in *Bedfordſhire*, ſowed Oats and Tills together, for feeding her Cows in Winter; but ſhe had always red Calf's Fleſh, though they produce Abundance of Milk. The ſame Effect has a red, black, or bluiſh Clay, or black Loam, *&c.*

*To make a Cow glean well.* If the Cow calves in a Morning, milk her before the Calf ſucks, and let her drink the Milk; then, at Noon, put a Fire-ſhovel, full of fiery Embers, or Aſhes of Wood, into a Pail of cold Water, ſo that it may make it blood-warm; then let her drink the Water off, and, after that, give her clear Water, warmed to the ſame Heat, once or twice. This Method of giving Water to a new-calved Cow, wherein Aſhes are thus put, is conſtantly practiſed by ſome to cleanſe her, and bring away her Glean.

*A ſecond Way.* Others will put a Quart of Ale to a Pound of Treacle and boil it; to which they add as much black Pepper, as will lie on a Crown-piece, and ſome Water, wherein ſome Penny-royal has been boiled, and give it out of a Horn to the Cow. This is conſtantly done by ſome.

*Hoving Cows in Clover.* Still look very watchfully to your Cows that feed in Lucern, or Clover, for the Danger of hoving is not yet over, eſpecially where the Graſs is rank, and it is a wet Seaſon;

Seaſon; or, if the Crop be mowed off, beware of the ſecond new Head, for a Cow was killed by it in a frim growing Time. The Sap, in theſe Graſſes, is very powerful in this Month. Obſerve the ſeveral Remedies I publiſhed in laſt Month, and in *April*.

*Summer Crams for ſuckling Calves.* If your Graſs happens, through exceſſive dry Weather, to be burnt up, or otherways ſhort, ſo that the Calf has not its full Fill of Milk, then mix Oatmeal, finely ground, with Bean-flour and Milk, and make it into Crams about the Bigneſs of a Boy's Thumb, and put one at a Time down its Throat, and pour a little Milk after each one, 'till it has ſwallowed three or four immediately before or after Suckling, at Morning and Night. Others will cram but once, and that is late at Night. In hot Weather, this Compoſition is better without, than with Spirits; but do not begin to cram, 'till the Calf is, at leaſt, three Weeks old. This is what I ſometimes practiſe myſelf, that ſuckle Calves all the Year.

*A ſecond.* Another grinds white Peaſe, and mixes them with Flour of Malt and Chalk, of which, with Milk, he makes Crams.

*An Account of a Bull, that commonly got white Calf's Fleſh.* The Obtaining white Calf's Fleſh chiefly depends on the Bull, the Cow, and the Soil. I have wrote on theſe in laſt Month, and here ſhall add, that, near *Chedington* in *Bucks*, there was kept a white-fac'd, pale, reddiſh Bull, that ſeldom failed of getting Calves with white Fleſh; he had alſo a white Eye, and a brown Muzzle. A yearling Bull, if of a good Size, will ſerve a Herd of twenty, or more Cows, and is better, in one Reſpect, than one of two Years old, becauſe his Youth will prevent his running wild, or unlucky, ſo ſoon as if he was older. At *Winſlow Fair*,

*Stow-Fair*, on *Holy Thurſday*, 1739, I bought a Bull for a Gentleman, whoſe Meadow-ground was ſo rich, as to cauſe moſt of the Bulls, he ever kept, to begin to be vicious the firſt, or ſecond Year; and for this Reaſon he was obliged to kill, and buy in others often, for here a Bull always died fat. I chuſe to buy in one the moſt taper-headed, rather than too much upon the Chuckle, or round, with a ſhort Cod, and thoſe other Marks mentioned in the laſt Month. But I think it is a great Pity the Poll-bull, as I ſaid before, is not more in Uſe, that ſuch fatal Accidents may be avoided, which, we often hear, are committed by the horned Sort; for beſides the lamentable Caſe of *William Noir*, as I have wrote on, I ſhall here preſent you with two others, *viz.*

*How a poor Man was killed by a Bull gathering Water-creſſes.* About the Beginning of this Month, as a poor Man was gathering Water-creſſes, a Bull run his Horns into him at once, and killed him on the Spot. And no Wonder, ſince in many large Grounds, where Path-ways are common, it is impoſſible for an old, weakly, or unarm'd Man to make his Eſcape from this nimble, furious, ſtrong Beaſt, though the Blackmoor did, I am going to mention.

*How a Blackmoor alone in a Field killed a ſavage Bull.* A Blackmoor, who was Servant to the late Earl of *Caernarvon*, and who lived at *Wing-park*, in *Bucks*, buying a Bag of Nails at *Leighton-Buzzard*, was told, that, if he went ſuch a Way Home, he would meet with an unlucky Bull. The Black replied, — If he was the Devil, he would fight him: — Accordingly, he went into the ſame Field where the Bull was, who preſently made at him; but the Black, by taking the Advantage of a ſtrong, thick Buſh, doged the Bull round the ſame, and at laſt, catching hold of his Tail, ſo beat

beat him with the Bag about the Cods and his Legs, that he killed the Bull with the Pricks of the Nails. Such a bold Attempt, indeed, may be admired, but not imitated, leſt it be attended with that Fatality, the following Relation gives an Account of.

*How a Gentleman was killed by a Bull he bought himſelf.* A Gentleman, who lived ſome Scores of Miles diſtant from *London*, wanting a Bull, one was offered to him, with this Caution, That he was apt to run at People. The Gentleman anſwered, I do not like him the worſe for that, becauſe he may be ſerviceable to me, in keeping off the Poor from pillaging my Hedges for Fire-wood. Preſently after this, another Gentleman, his Couſin, walking in the ſame Field, the Bull ran furiouſly at him, but, by Dint of Heels, he made his Eſcape. On relating this Accident, the Owner ſaid, the Bull had only a Mind to play with him; but as it happened, he himſelf proved ſuch Comedy a Tragedy; for, going into the ſame Ground, the Bull purſued him, 'till he tore out his Entrails with his Horns, for, according to the old Saying, *It's dangerous meddling with edged Tools*; and ſo it is with horned Beaſts, as is made appear by what follows.

*How a Boy was near being killed by kicking a Cow.* A Cow, that had large Knobs of Dung hanging at her Tail, was kicked on the Arſe by a bold Boy in *Leighton* Town; and, as he was kicking her, ſhe ſhook her Tail, that accidentally twiſted about the Boy's Leg, by which Means the Cow drew him along the Ground, from the *Croſs* almoſt to the Church, and would have killed the Boy, had not ſome Men ſtopped the Beaſt, and delivered him: But he would never after kick a Cow's Arſe.

## CHAP. XIV.

## *Of* BUTTER.

*THE Improvement of Butter.* Notwithſtanding the ample Account I publiſhed in laſt Month of this uſeful Product; I have farther to add, on the ſame Subject, and to write, that, the higher the Graſs the more Milk, for, as ſuch Graſs is commonly of a flaſhy and more watery Nature than the ſhorter, the Milk is more, but the poorer; and, conſequently, the Cream is the leſs, and will keep the leſs Time. But, if Cows feed on the long Graſs of ſalt Marſhes, the Caſe is altered, for this returns moſt Milk and Cream, and very good Butter. Alſo, the ſhort Perriwig-graſs, of Upland-meadows, will produce more Cream than the longer Sort. Two Gallons of Milk from ſuch thick ſhort Graſs, has yielded as much Cream, as three Gallons from longer, it being a more nouriſhing Food, and keeps the Cows in better Health. So the beſt Hay, on this Account, is cheapeſt; becauſe it makes the Beaſt ſtrong, and then ſhe will give the better Milk, and the greater Quantity. Milk from the Feed of Turneps on the Ground, or from thoſe gathered and preſently given to the Cow, will be bitter and rank; but if they are firſt laid in Heaps, for two or three Days, without their Leaves, to ſweat a little, their Rankneſs will be very much abated. From hence I infer, that all artificial Graſſes, by firſt mowing them a little at a Time, and kept a ſmall Space before they are given in a Rack, will produce a ſweeter Milk, than when fed in the Field. Accordingly the following Account of St. *Foyne*, thus

thus ſerved, will breed a good Milk, and that a moſt ſweet Butter, if managed after the Method I am going to ſhew, *viz.*

*A new Way to make the beſt of Butter from St.* Foyne, *being an Account thereof, ſuppoſed to be ſent to the* Royal Society. The following Eſſay is is extracted from a Letter, which has been ſent us by a Gentleman, who has contributed his Aſſiſtance from the Country, where he cultivates a large Eſtate of his own getting, and communicates to others ſuch Improvements, as he makes with a generous Openneſs of Spirit, and Freedom, rarely to be met withal among us. The Subject of the Letter is upon a new and much more profitable Management of a Dairy, than is commonly known or practiſed: It cannot but be uſeful to a World of People, and we publiſh it with that Intent. The firſt Part of the Letter we omit, as containing nothing but Directions for the Preparation of the Ground, and begin with this Deſcription of the Graſs, which he conceives moſt proper: Now there is, he ſaith, a foreign Graſs, much properer for light Lands than Clover, it is generally known by the Name of St. *Foyne:* But that which I have ſeen in ſeveral Parts of *Berkſhire*, *Wiltſhire*, *Somerſetſhire*, and many other Countries, is a Baſtard-ſort, and much inferior to the true St. *Foyne*, which may, (when we are at Peace with *France*) be had very reaſonably from *Dunkirk* or *Calais*, and will, without Queſtion, be imported in great Quantities, and ſold, in a ſhort Time, in the Seed-ſhops and elſewhere. This Seed, being much larger than Clover, muſt be ſowed in a much greater Quantity. Four Buſhels to an Acre will be better than three, which is the leaſt you can venture to ſow; obſerve the Directions given for Clover, as to manuring while the Turf is tender, and the Earth is frozen; but

as to the Time of letting it grow, that may, if you pleaſe, be five Years, for ſo long it will continue in its prime Perfection; and, running into a large knotty Root, does ſo enrich the Ground it grows on, that, after it has born St. *Foyne* five Years, it will afford three excellent Crops of what Corn you pleaſe, and ſo improve itſelf by alternate Burdens of Graſs and Grain, 'till it arrives at the utmoſt Perfection, which Land is capable of reaching. Nothing is ſo ſweet, nothing ſo innocent as this St. *Foyne*; but, above all, it is obſerved to increaſe Milk, in Quantity and Quality, beyond any Graſs yet known in the whole World; and it is for this Reaſon, that I adviſe you to keep Cows upon it, and make your five-years Dairy. But, when I ſay a *Dairy*, imagine not that I mean ſuch a Dairy, as is commonly kept in *England*. Would you know what Kind of Dairy? I will haſten to inform you, and conclude my *Letter* with this Particular: The worſt Acre of a hundred, which Quantity of Land is moſt ſuitable to this Purpoſe, improved by this Graſs, will very well maintain four Cows, from the firſt of *April* to the End of *November*, and afford, beſides, a ſufficient Store of Hay to make good Part of their Subſiſtence the four Winter Months following. You muſt buy then about four hundred Milch-cows, but take Care you chuſe them with Judgment. I have bought your largeſt Sort of Runts from *Wales* for leſs than fifty Shillings a Cow, with a good Calf by her Side, which I always diſpoſed of, as ſoon as I could. You will obſerve, that I make too good an Uſe of the Milk to afford the Calf his Share of it. I generally keep theſe Cows above twelve Months, and then, ſelling them, ſometimes, for four Pounds a-piece, I ſtock myſelf with ſuch that are new milch'd. I obſerve this Rule every Year, and the Trouble is ſufficiently

ly rewarded by the Advantage it brings me; for, beſides the Profit I make by ſelling dearer than I buy, I avoid the Inconvenience of having any Thing to do with Bulls, and the Conſequences; ſo that I always preſerve my Cows in their full Milk, and find it no uncommon Thing for one of theſe Milch-cows to be milked twice a Day, and afford a Gallon and a half at a Meal. Four hundred of theſe Cows will coſt a thouſand Pounds; and you will find, that, coming from a poor Paſture to a rich, they will proſper, and increaſe both in Milk and Size. In eight convenient Places about your hundred Acres, let there be built eight thatch'd Sheds, a little riſing in the Middle to carry off the Water; the Height may be ten Feet, and the Breadth thirty; each of theſe Sheds ſhould be a hundred and twenty-five Feet long, and, under the higheſt Part, directly in the Middle, you muſt raiſe a ſlight Partition, lathed and plaiſtered, which ſerves to ſupport the Ridge of the Roof, while the two Sides are ſuſtained by ſquare, wooden Poſts about eight Feet high, and placed at proper Diſtances. On either Side of the Partition-wall, let there be fixed a Kind of Rack, like thoſe in Stables, which is to run the whole Length of the Shed, and muſt be placed as high as a Cow can reach her Fodder from. The Shed muſt next be divided into Stalls, like thoſe for Stone-horſes, and each Stall will be about five Feet broad. The Length of theſe Stalls muſt be exactly fitted to that of a Cow, that a Croſs Bar, being placed at the outward End, may keep the Beaſt from running backward. Thus every Shed will hold fifty Cows, five and twenty on each Side of the Partition. To every one of theſe Sheds you muſt appoint a Man, whoſe Buſineſs it will be to clear the Place, and carry off the Dung; as alſo to mow the St. *Foyne* every Day, and give it to the Cows in the Rack before-

before-mentioned. This Man beginning at one End of his Proportion of Ground, and going gradually on to the other, the firſt Place will always be fit to mow again, by that Time he has gone through his whole Diviſion. Your Cows are thus fed at Diſcretion, with neither too much, nor too little; they are not peſtered with the ſcorching Heats, nor troubled with the ſtinging Fly, which, in open Paſtures, often makes them whiſk about, and trample down more Graſs, than they eat. At each End of every Shed, you muſt build a ſlight Room of Brick, thirty Feet ſquare, and ten Feet high, which is to be divided, the Croſs-way of the Shed, into two Partitions, each fifteen Feet broad, and thirty Feet long; that, which joins the Cow-houſe, muſt be paved with Tiles, and is to ſerve for a Dairy; the other muſt be floored and windowed, and is to be a Lodging-room for the Dairy-maids. Every Shed will require five Maids, that is, to every ten Cows one Dairy-maid; fewer might ſerve, but it is better to exceed, than fall ſhort, in this Particular. Thus each Dairy will have two or three Maids belonging to it, whoſe Lodging will be the Room adjoining, and whoſe Care is to extend to the Shed on both Sides the Partition, to the five and twenty Cows which are neareſt to their Station. All along both Sides of the Partition, at about a Foot above the Ground, let there be fixed cloſe to the Wall a ſtrong Pipe of Lead, a little leſs than an Inch Diameter; both which Pipes, being ſomewhat raiſed exactly in the Middle of the Shed, muſt have a gentle, and almoſt an inviſible Deſcent from that Riſing to the Dairies, through the Walls of which their nether Ends are to be brought, and there wrought into one another, that whatever deſcends through them, into either of the Dairies, may have Iſſue but at one Mouth. This Mouth of the Pipes muſt

muſt be made very ſmall, and neatly fitted into the hollow End of a ſtrong wooden Axle-tree; which, whilſt it is turning ſwiftly round the Mouth of the Pipe, may by no Means ſtrain it by the Motion, but receive into its own Hollow the Milk which deſcends through the leaden Pipes, without ſpilling any this Length, and paſſes ſo far through a Wheel, or Veſſel like a Barrel, only much larger in its Circumference. The Axle-tree, which this Veſſel is to turn upon, is bored very full of round Holes, through which it delivers the Milk into the Veſſel, as faſt as it receives it from the Pipe. The Veſſel muſt be capable of containing, at leaſt, three Times the Quantity of Milk, which it is deſigned to receive; and there muſt be ſix Wings, or thin Pieces of Wood, glued on edge-ways to the wooden Axle-tree, whoſe Length and Breadth muſt be ſo contrived, as to leave a free Space of ſix Inches at either End of the Axle-tree, and a Foot between their Edges length-ways, and the ſmooth Inſide of the Veſſel; in the moſt convenient Part of which muſt be contrived a Door, to open and ſhut down upon Occaſion, as cloſely as if there was none. This Door will perform its Work very neatly, if you line the Inſide and Edges with ſome Kind of Cloth, which is commonly uſed in the Preſſing of Cheeſes. The other ſolid End of the Axle-tree muſt extend itſelf about five Feet longer; and the whole Length may be ſupported by ſquare wooden Poſts, and turn in their Tops, which are to be made hollow, and kept greaſed for that Purpoſe. This End of the Axle-tree is to be faſtened into a Wheel, exactly like thoſe which are uſed in many Places for the Roaſting of Meat. The Diameter of this laſt Wheel muſt be within ſix Inches of the Height of the Dairy, and two or three large Dogs, being put into it at a Time, will turn it with extraordinary

nary Swiftneſs: The Dogs are eaſily taught, and will at laſt take Delight in the Exerciſe. I have brought up a large Buck to the Practice of this Labour, and it is wonderful to ſee the Force, with which he runs round, an Hour or two together, and turns a Wheel of ten Feet Diameter; but you muſt make your Wheel as light, as it can poſſibly hold together. I have but one Thing more to ſay, and I finiſh this Direction: Pretty near that Side of every Stall in your Shed, to which the Maid muſt come to milk the Cow that belongs to it, let a Hole, as ſmall as will ſerve the Occaſion, be contrived by your Plummer, in the uppermoſt Part of the leaden Pipe, to ſhut and open with a little Screw, which Screw, for Fear of loſing it, may be faſtened by a little iron Chain to the Body of the Pipe. I have endeavoured, in the Deſcription of all this, to make my Meaning as plain as poſſible; if you do not comprehend it at firſt, you will after two or three Times reading and conſidering it. I would have no Man imagine I propoſe a Thing too troubleſome; for one great Benefit, in the Practice I am here recommending, is, that it ſaves above half the Labour, which is, at preſent, abſolutely neceſſary in every Dairy in the Kingdom. The Milking-pails, that muſt be uſed here, are very broad and ſhallow, in Shape like a Baker's Sieve, in ſome Meaſure. They muſt ſtand upon three Legs, of a little more than a Foot high; and, from the Bottom of one Part of the Rim, muſt come a long tin Pipe, ſomewhat reſembling the Neck of a Still, the Noſe of which is to be put into one of the Holes in the leaden Pipe; and, the Pail at the ſame Time ſtanding under the Cow, the Milk, as faſt as it deſcends through the tin Pipe into the leaden one, is thence conveyed into the Veſſel, which I juſt now deſcribed, in the Dairy. Obſerve, that, to prevent

prevent the Hairs, or other Impurities, from deſcending with the Milk; the Mouth of the tin Pipe, which opens into the Pail, is to be covered with a Straining-cloth. Thus the Maids, removing from one Stall to another, diſpatch their Work neatly, and muſt remember to ſcrew up every Hole, before they leave it. Morning and Evening, before they begin to milk, they muſt put their Dogs into the great Wheel, by whoſe Motion the Veſſel, which I call a Churning-mill, being turned ſwiftly round, receives the Milk, yet warm, thro' the little Holes in the hollow Axle-tree; and, by Means of thoſe ſix Wings, I mentioned, it is agitated with ſo great a Violence, that there is not only a much larger Quantity of Butter produced this Way, than by the other Method of ſetting it to cream, but it is, in every Degree, ſo much beyond it, even in Taſte and Colour, that the Difference is incredible; and yet, what is ſtill a more conſiderable Advantage, the Cheeſes, which you make of the Butter-milk, may be reckoned amongſt the beſt and richeſt Kind in *England*. When the Dairy-maids return from Milking, by the Time they have waſhed their Pails, and taken a little Reſt, they have nothing to do, but to open the Door of the Mill, and gather the Butter, which they will find in a huge Heap, ready churned to their Hands; after which, letting out the Remainder into a Ciſtern, which ſhould be near, they may proceed to make Cheeſe, in the very ſame Manner as they would in the common Practice of their County; but the Dogs muſt ſtill continue in the Wheel. You will wonder what Buſineſs they have in the Wheel, when the Veſſel is empty: Your Maids muſt have a good Quantity of hot Water juſt now in Readineſs, the greateſt Part of which muſt be poured into the Veſſel, and the Door made faſt upon it; the Dogs may then be permit-

ted to renew their Labour for half a Quarter of an Hour, in which Time the Veſſel will be compleatly waſhed and ſcalded, and then, the Water being let out, the Door muſt be kept open, 'till next Milking-time. The leaden Pipes are kept ſweet by the ſame Means, for, in that middle Part where each Pipe riſes higheſt, is to be a larger Hole than any of the other, into which a ſhallow broad Funnel being put, a convenient Quantity of ſcalding Water muſt be poured in, which runs through the Pipe into the Churning-mill, and carries away all the Relicks of the Milk as it paſſes along. I never had a Cow that brought me ſo little Profit, as ten Pounds a Year. Thus will a hundred Acres amount to four Thouſand Pounds. The Charge I muſt leave to my Reader.

*Remarks on the Eſſay for making Butter from Milk, as it comes from the Cow.* The fore-mentioned Account, as I take it, was ſent to the *Royal Society*, and, by them, drawn up in a compendious, inſtructing Method, and conveyed into the World for a general Good, for which the Publick is very much obliged to them, becauſe, in my humble Opinion, when this delicate Way is once got into common Practice, People will enjoy the ſweeteſt and wholeſomeſt of Butter, that will be impregnated with the lively Quinteſſence of Herbs, more abundantly than that whoſe Cream has ſtood twelve or twenty-four Hours before it is ſkimmed off, and afterwards kept two, three, or more Days, 'till it is almoſt ſour, as the uſual Way now is; which, conſequently, muſt be not only unwholeſome, as well as unpleaſant, but, *Secondly*, alſo often proves a Loſs to many, eſpecially to thoſe whoſe Livelihoods depend in a great Meaſure on its durable Sweetneſs. *Thirdly*, there is a conſtant Improvement made of the pooreſt Ground, as Sands, Gravels, Chalks, and ſome

dry

dry Loams, and that in the higheſt Perfection; for, by Means of their being laid down five Years together, there is no Loſs of Time, nor Charge of Manures and Plowings, at leaſt but very little; for, by feeding Cows thus, under a confined, covered Place, there is made the greateſt Quantity of Dung in the richeſt Manner poſſible, which, though it comes from a Beaſt that naturally makes but a poor Sort, yet it may be made a moſt fertile Dreſſing for all Sands, Gravels, and Chalks, if kept out of the Waſh of Rains, with the Addition of Aſhes, Lime, Soot, or other dry Manure mixed with it. *Fourthly*, by thus ſowing St. *Foyne* Seed in ſuch lean Earth, you enjoy that Advantage, which the richeſt Vale Lands are often deprived of; and that is, when they are burnt up by ſcorching, dry Summers, here you have Plenty of Graſs, by Means of the great Length of the St. *Foyne* Roots, that run ſo deep into the Ground, as to be free of this Damage. *Fifthly*, the Buttermilk, that is, commonly, moſt of it loſt, becauſe of its Sourneſs, by the Cream's being kept ſome Days in the old Way, is here put to a moſt profitable Uſe in the Making of excellent Cheeſes. *Sixthly*, as the Author ſays, after the Land has been five Years under St. *Foyne*, it may be plowed up, and Wheat harrowed in, on only one Plowing, the firſt Time, without any Manure; and, after it has had two or three more Plowings, when the firſt Crop of Grain is got off, the ſame Ground may be ſowed with Barley, or Oats, and St. *Foyne* ſowed among it again for five Years more, mowing and feeding Cows with it under Cover. I ſuppoſe, this Way of Dairying will, at firſt, ſeem ſtrange, and even impracticable to ſome. As to this, let them but conſider the Proof of it, that almoſt daily appears to thoſe who milk their Cows at a Mile, or more Diſtance, and bring the

Milk Home in wooden Peds, in the Shape of old-faſhioned, upright Churns on Horſe-back, for on the Tops, or Lids of theſe, in Summer-time eſpecially, there often appears Butter, made by the agitating Motion of the Horſe's Walk, or Trot, and by the Heat of the Wheather; and it was this I ſuppoſe, that gave the firſt Hint of this excellent Practice to the Inventer.

*An Account of Utenſils, or Furniture, for ſetting up a Butter Dairy after the common Way.* That this End and Purpoſe may be effectually anſwered, there muſt be ſuch a Number of proper, wooden, round, ſhallow Tubs, or Kivers, or leaden Stands, or better ſome of both, and other Utenſils, as are ſufficient to carry on a Dairy, in a clean, ſweet Manner. To twelve Cows under Milk, there ſhould be a Dozen of theſe Kivers bought in; the largeſt coſt five Shillings, and the ſmalleſt three Shillings each, all made of Oak, with broad aſhen Hoops, and three leaden ſhallow Stands, made of mill'd Lead, faſtened in thin deal Frames, with a Cork-hole in the Middle of each, for letting out the Milk, and leaving the Cream behind. One of theſe laſt about five Feet long, and three Feet wide, at *Leighton-Buzzard* (where there were firſt invented) coſts twenty Shillings. Others of three Feet long and two broad, in Proportion. All which round wooden Kivers, and leaden ſquare Stands, are perfectly neceſſary for this Undertaking; ſome to ſtand drying, while others are under Milk. Now both the Kivers, and Leads, muſt be always cleaned thoroughly well, after Milk has once ſtood in them; but in a different Manner. For the Kiver, you muſt uſe only a hard Bruſh, with boiling Water, and, when rinced, ſet to dry; but the ſmaller Kiver is commonly boiled in a Copper, and ſo ſhould the bigger one, if there is Room enough for them. For the Leads, you muſt

uſe

uſe a Wiſp of Straw or Hay, Wood-aſhes, or Bean-ſtraw Aſhes, and boiling Water, with which ſcrub or rub them well; others make Uſe of Sand for the Leads, inſtead of Aſhes. The Reaſon for ſuch different Management is, becauſe, if you were to uſe Aſhes, or Sand, to rub and clean the Kivers with it, in Time, it would raiſe a Roughneſs in their Woods, as to cauſe them to breed and lodge a ſudden Foulneſs or Fur in them, that would, again, ſoon bring on a Sourneſs in the Milk and Cream. But, as Lead has a ſmoother and harder Body than Wood, it is leſs in the Power of Sand, or Wood-aſhes, to bring it under this Damage.

Next, muſt be had, twelve earthen glazed Cream-pots, which, after each is uſed, muſt be boiled in the Copper.

To theſe muſt be added four large Milking-pails, that are commonly made with oaken Bottoms, and aſhen Sides, that they may the eaſier be ſcoured white; and, for this Reaſon, ſome will have their Kivers made after the ſame Manner. Theſe Pails muſt be rinced out every Night, with only cold Water, and, after next Morning's Milk is brought in, they muſt be ſcrubbed with Aſhes, or Sand, and hot Water, and then boiled about two Minutes in the Copper.

Beſides theſe, there muſt be a cooling Tub, that will hold about thirty Gallons. Into this, all the Milk, as it comes directly from the Cows, muſt be ſtrained and ſtirred now and then. The fuller it is, the oftener and longer it ſhould be ſtirred; ſometime half an Hour, or more, it is little enough to cool the Milk, before it is put into the Kivers and Leads.

Laſtly, the Oaken-barrel Churn, or Mill, muſt be in a Readineſs, that is about two Feet Diameter

ter at each Head, and about three Feet in Length, has two Winches, or iron Handles, for a couple of Perſons to turn it at a Time on a wooden Stand, that coſts about twenty-ſeven Shillings, Iron-work included. Such a Veſſel will churn four Dozen of Butter at a Time, and is cleaned each Time, by putting into it one Pail of warm Water, as ſoon as the Butter is taken out, which ſerves to rince it; and then two Pailfuls of boiling Water muſt preſently follow, to ſtand a Quarter of an Hour in it, before it is turned out. All theſe Utenſils I have had the buying of.

*To make a freſh Butter in the hotteſt Weather for a* London *Market, and yet churn but once a Week.* In many Places, thoſe Higlers or Carriers who live thirty, or more Miles from *London*, can go thither, but once a Week conveniently, and then ſome Dairy-men are obliged to churn for them only once a Week, others twice in that Time. I mean, where there is a Contract between a particular Dairy-man and a Higler, as is a common Cuſtom in *Aylesbury* Vale, for furniſhing him, with Butter all the Year, at a Winter and Summer Price. To do this, it requires a great deal of Care, and various Managements, of which I ſhall here give you a preciſe Account, *viz.* Now being compleatly furniſhed with neceſſary Utenſils, and the Morning Milk ſet, the firſt Skimming, in Summer Time, is to be made at Night, a ſecond next Morning, a third the Night following, and, if the Weather is not too hot, a fourth the Morning after. The firſt three Skimmings, from one and the ſame Tub or Lead of Milk, is to be put into one of the earthen Cream-pots, which, every Morning following, is to be ſhifted into a freſh Pot; but the laſt, or fourth Skimming, is to be put into a Pot by itſelf, to be churned alone, for making an Underline-butter (as the Dairy-men call

call it) worth a Penny a Pound leſs than the prime Sort, made with all the firſt three Skimmings. If the Milk ſtands only three Skimmings in all, the two firſt muſt be for the beſt, and the laſt for the Underline-butter, Leads, in Summer, yield one Skimming more than Kivers; but, in Winter the warmer wooden Kiver yields one Skimming more than a Lead. In Summer Time, they ſtrain in as much cold Spring-water, as will half fill the Churn, to ſtand all Night, 'till the Cream is ſtrained in its Room; but, in Winter, they put in as much warm Water, to ſtand a Quarter of an Hour, when it is to be emptied, and the Cream immediately put into the Churn after it. After the Cream is ſtrained into the Churn, rince the Pots, in Summer, with half a Pint of cold Water, in Winter with as much hot; or you may do the ſame with ſkimmed or new Milk, and put all the Waſtings into the Churn, with the Cream: (Others will do none of this) then ſtop up, and churn away leiſurely, and faſter by Degrees, giving it Vent at the Peg-hole, as the Swell comes on. Some, again, obſerve to churn briſk a little at firſt, and ſlower afterwards; but this is generally regarded: That, in Summer Time, the ſlower you turn, the ſooner the Butter comes, becauſe, if you then turn too faſt, it will heat the Cream too much, and make the Butter white, ſoft, bitter, and be the longer coming. On the right Management of this depends a great deal of the Art of a Dairy-man; for ſome Cream has been churned ſixteen Hours by a Fire-ſide, and could not get Butter; but they were forced to give all to the Hogs at laſt. If after you have churned ſome Time, and then be forced to put in hot Water, or hot Milk, to make it come the ſooner, the Butter will be a little bitter; and if you put Milk with the Cream into tha Churn, it will be the longer coming;

coming: Therefore many ſkim off only the neat Cream; the Underline-butter, alſo, ſeldom or never comes ſo ſoon as that made with better Cream. A clever Dairy-maid, to make her Butter come ſtiff and good, when ſhe thought her Butter about half come, would put a Quart or two of cold Water into her Churn, in Summer: But, in Winter, ſhe put in as much warm Water, as believing it gives the Butter a better Colour, than if ſo much Milk had been put in, which is apt to whiten it the more. When the Butter is come, turn very ſlow, that it may gather the better. Butter ſhould be churned by two or three of the Clock in a Summer-morning, and then thrown into cold Water, for an Hour before it is made up. But one of our accuteſt Dairy-men uſed to churn in the Night-time, during the hot Seaſon, and, as ſoon as he could, would put the Butter into a Water-bucket, which he let down into the Well for a little Time, 'till it was very cold, and by this Method had the beſt of Butter.

*To make a pure ſweet Butter by churning twice a Week, and ſelling it only once in that Time.* When you have got your half Week's Cream, churn it into Butter, beat it, ſalt it well, and put it into a glazed earthen Pot. Then churn the other half Week's Cream, thus: Cut the laſt ſalted Butter into thin Slices, and put this, and the Cream, into a Barrel-churn, and churn all together; by ſo doing, the Cream will gather about the Slices, and all will become a Body of excellent freſh Butter, without any further Addition of Salt; which beat well, that the Butter-milk, or Whey, may be clean got out, and make it up between two large Trenchers, whereof one ſhould have a Thumb-hole in it.

*To make a fine Butter, by churning and ſelling it twice a Week.* But in caſe you can ſell your Butter

ter twice a Week, which is certainly the ſureſt and beſt Way; then churn twice a Week, but don't mix Salt with your Butter, unleſs it be firſt beaten, and made very fine; and even then, it is not ſo good a Way as to uſe Brine inſtead of it. Make a Brine ſtrong enough to bear an Egg, ſtrain it through a fine Cloth, to take out all Blacks and Sullage, and work it well in a wooden Kiver, into a flat Shape. Then, in this new churned Butter, make hollow Impreſſions with your Knuckles, on which pour your Brine, and work or knead it in ſeveral Times, 'till, by your Taſte, you find it ſalt enough. The Excellency of uſing Brine, inſtead of Salt, is obvious on this Account: When Salt is directly incorporated with the Butter, it's apt to appear in Rows, and be felt gritty in the Mouth when eaten alone with Bread, and conſequently does not affect the Butter in all its Parts alike, to the Hazard of its keeping good but a little While. On the contrary, the Brine, being of a watery Body, is eaſily impregnated into all the Parts of the Butter alike, to its longer Preſervation, and pleaſanter Taſte.

*Butter made with boiled Cream once a Week.* A certain Dairy-woman, in the Vale of *Ayleſbury*, as ſhe was obliged to churn but once a Week, made it her conſtant Practice, all the Summer-ſeaſon, to put her Mornings and Night Skimmings of her Cream in a Kettle, and, when it grew warm over the Fire, ſhe would ſtir it, and continued ſo doing, 'till it boiled a Wallop or two; then ſhe put it into an earthen Pot, and kept ſtirring it 'till it was almoſt cold, leſt it clotted: To this ſhe put her other raw Cream to preſerve all ſweet, and, at the ſame Time, ſtirr'd in a Handful of Salt. In Winter ſhe would likewiſe put ſome Salt into her firſt raw Cream, and it ſecured all the reſt of the raw Cream that was mixed with it 'till ſhe churn-

ed, without boiling any, till the hot Weather came on.

*To make an underling, or whey Butter.* Where Butter is only made, the laſt, or the two laſt ſkimmed Creams (as I ſaid before) ſaved by itſelf, makes it; but, where they make Butter and Cheeſe, it is often made with the laſt, third, or fourth ſkimmed Cream, and an Addition of Whey-cream, and ſtill is called Underling Butter, in *Ayleſbury* Vale. But, when Butter is wholly made with Whey-cream, it is then juſtly named Whey-butter; however, where there is no Fraud uſed, they are both ſold a Penny, or Two-pence a Pound cheaper than the prime Sort; which may ſerve as an Information to all, particularly to thoſe who buy large Quantities of freſh Butter, leſt they lay out their good Money for a bad Sort. But this is not all that I can publiſh on this very uſeful Subject, for, as I am here confined not to ſwell this Monthly Treatiſe beyond a moderate Price, I muſt poſtpone writing many more Lines on the Improvement of Butter, 'till the next Month of *July*; wherein I ſhall inſert the Way, that is now practiſed in ſalting down Barrel-butter; another, and a better Way, than what I have already mentioned, to reduce ſalt Butter into freſh, as ſome of the acuteſt Dairy-men do in *Ayleſbury* Vale; beſides ſeveral ſerviceable Curioſities, relating to this profitable and neceſſary Butter-art, never before printed. Here alſo, I cannot forbear obſerving, that it is with great Regret I am forced to ſtop my Pen from publiſhing ſeveral other Chapters of moſt uſeful Matters, which I could do in this Month, but am hindered for the aforeſaid Reaſon.

CHAP.

## CHAP. XV.

## *Of* CHEESE.

TO *make a* Cheſhire *Cheeſe.* Some make them with all new Milk, others with half ſkimm'd and half new, and then it is a two-meal Cheeſe. When the Milk is as warm made, as when it comes from the Cow, they put three or four Spoonfuls of ſtrong Rennet into it, to make Cheeſe of a hundred Weight; and, when one is made of this Bigneſs, it is commonly done with all new Milk: The more Rennet, the ſhorter and bitterer it will eat. In about half an Hour's Time, the Curd will come in the Tub; then ſqueeze it down with the Skimming-diſh, take out the Whey, and break all the Curd as fine as poſſible with your Hands. A Cheeſe, about fifty Pounds Weight, muſt have half a Pound of Salt worked into it; which when mixed truly well, put all into a wet Cloth, and ſqueeze out the Whey clean; then lay the ſame into the wooden Mould, or Vat, and ſcrew it in a Cheeſe-preſs for four Hours; then take it out, ſalt the Outſides, turn, and put it into a freſh wet Cloth, and preſs it four Hours more. When this is done, take it out and lay the Cheeſe in a Tub of ſtrong Brine, to be covered all over in it, and turn it once a Day in the Liquor, for ſix Days together: If it is bigger, than one of fifty Pounds Weight, let it lie eight, or nine Days. After this it muſt be taken out, and laid on green Ruſhes, two or three Weeks together, where it muſt be turned every Day, and rubbed with a Hair cloth. Next is the laying of it on a Floor, or better on a Shelf, for its being turned and rubbed once or twice a Week, 'till it is got hard; and then it

ſhould be rubbed all over with half a Pound of Butter, to give it a yellow Colour, and preſerve it ſound.

*Their Management about* Nantwich, *in* Cheſhire, *in making Cheeſe.* Here they turn out their Cows, about Mid-*April* to Graſs, and then the Weeds, as the Chives, Horſe-mints, and others, are higher than the Graſs, which ſo effect the Milk, as to cauſe the firſt Cheeſes to be horrid rank, ſome to hove, ſo as to run into a Ball preſently after they are out of the Preſs, and be full of Holes. To prevent this in ſome Degree, they boil Part of the Milk, and put it to the reſt. They never make Cheeſe here, 'till they have milked the fifth Meal, after the Cow has calved. The bigger the Cheeſe, the better it is. In ſome great Dairies they will make two Cheeſes in one Day, of a hundred Pounds Weight each, and continue making their beſt Factor-Cheeſe till *Michaelmas*, and then a poorer Sort for the Country People; after this, a Butter to pot for their own Uſe, 'till the Cows go dry.

*How a Gentleman in* Bedfordſhire, *endeavoured to make* Cheſhire *Cheeſe.* This Gentleman, being a Native of *Cheſhire*, and living in a very rich Eſtate of his own, in *Bedfordſhire*, was very deſirous to have *Cheſhire* Cheeſe made here, as believing his Graſs was good enough for the Purpoſe: Accordingly, he procured ſeveral *Cheſhire* Servants, who, though they had all the Conveniences, that were neceſſary allowed them, yet could not keep the Cheeſe from hoving and rotting, for they could not make it ſtand.

*Cheeſe made with Sheep's Milk in* Denbighſhire. Five or ſix Ewes will give as much Milk, as a good Cow. When two Meals are got, heat them, and put them to a third Meal, as ſoon as it is taken from the Sheep, ſo that all muſt be in ſuch a Degree

a Degree of Heat, as when milked from the Beaſts. Then put your Rennet in, and let it all ſtand in a Tub, covered with a Cloth. Here will come more Curd, than from Cow's Milk; take it out, and break it fine with your Hand, put it into a wet Cloth, and then into a Preſs for ſix Hours. After this take it out, ſhift the Cloth, ſalt the Outſide, and preſs it again for ſix Hours more, turning the Cheeſe topſy-turvy; then lay it on Ruſhes on a cool Floor a Fortnight, turning it every Day, then put it on Shelves, and rub often. This Sort of Cheeſe will be fit to eat in three Months Time. At *Cheſter*, the Gentry give Sixpence a Pound for it, as it come out of *Denbighſhire*. It will never be hard, becauſe it is a very ſhort, fat Cheeſe, made with the fatteſt of Milk, and therefore taſtes and eats like Marrow, as being the richeſt Sort of all others.—— In next Month, I intend to give you an Account, how a cleaver Dairy-woman, who lived near *Gaddeſden*, made excellent Cheeſe (ſhe uſed to call *Scalded Cheeſe*) from Clover-graſs.

*Cheeſe made with Sheep's and Cow's Milk together, in* Hertfordſhire. I know a Gentleman, in *Hertfordſhire*, who, after he had ſold his graſs-fed Lambs off fat, would have his Ewes duly milked, for ſome Time, and then mix their's with his Cow's Milk, for making Cheeſe for his Family's Uſe; and ſo delicate a Sort it proved, that it was preferred to all others. There are ſeveral other Ways to make Cheeſes, that are made publick; which take as follows.

*To make a running Cheeſe.* Take three Points of Cream, and two Quarts of Strokings; ſet it mixed together on the Fire, 'till it is as warm as new Milk; take it off, and ſtir ſome Rennet into it, and, when it is come, preſs it down with your Hand, and then take it up as whole as you can;

ſo

ſo lay it in your Vat without breaking it: But, I ſhould have ſaid, after it is wheyed, heat the Whey ſcalding hot, and throw it upon the Curds, before you put it into the Vat; when this is done, put a light Weight firſt, then a heavier; after which it muſt be ſalted, and laid in Nettles pulled from their Stalks, and it will be ready to eat in three Weeks; for this Cheeſe muſt not be put into a Screw Cheeſe-preſs.

*To make a two-meal Cheeſe.* Heat the Skim-milk as warm as the other Meal from the Cow; ſtrain all through a Sieve and Cloth into a Tub; then put about one Spoonful of Rennet to a Cheeſe, and, in about half an Hour, the Curds will come; then gather them, with your Hand, into a Cloth upon a Rack, and ſqueeze the Whey clean out. Cut the Curd into thin Slices, and break it, or crumble it ſmall into the Vat; or ſqueeze it in the Slices, and put it into a Preſs, in a Cloth, for twenty-four Hours; then take it out, and ſalt it on both Sides, when you are to put the Cheeſe into a freſh Cloth, and preſs it again all Night; next Morning take it out, and it is enough.

*To make the great Cheeſe after the* Somerſetſhire *Way.* This, being one of the richeſt and largeſt Sorts of all, is ſeldom made. Formerly they were more in Faſhion than now; and then, if one Farmer had not Milk enough, Neighbours joined their Stocks for the Purpoſe; for this requires, at once, twelve Cows Milk to be mixed with all the Cream from the Milk of the ſame Cows laſt Night; both which muſt be ſtrained into a Tub, and then three, or more, ſpoonfuls of Rennet muſt be directly put into it. When the Curds are come, break and whey it well; and, when it is cleared from the Whey, break it again, and work three Pounds of pure freſh Butter into the Curd, with as much Salt as you think proper; then put it into

into the Preſs, and turn it in the Preſs very often, waſhing and changing the Cloths every Time, 'till towards the laſt, and then uſe three or four dry ones. This Cheeſe muſt remain forty Hours, more or leſs, in the Preſs, as it is bigger, or leſſer. As ſoon as it is taken out, waſh it in Whey, and lay it in dry Cloths, 'till it is dried; turn it often on the Shelf, and, with due Age, it will prove an excellent Cheeſe.

*Slip-coat Cheeſe.* Mix a little Rennet with ſome new Milk that is quite cold; when it is come enough, put it into the Cheeſe-vat as whole as you can. Here let it ſtand for the Whey to drain out, ſome Time; then ſet a two-pound Weight on it. As ſoon as it will hold together, empty it into clean wooden Moulds, or Cheeſe-vats, for this muſt not be put into a Preſs, and here let it lie for two or three Days; when it is dry, lay it on common Dock-leaves, and ſhift it often, 'till it is ripe.

*A rich Cheeſe to be made in* September. Heat two Quarts of Cream, 'till it is ready to boil; mix it with ſix Quarts of cold Strokings, one Quart of boiled Water, two Yolks of Eggs, and two Spoonfuls of Rennet, with a Spoonful of Sugar; ſtir theſe all together, 'till milk-warm; when the Curds are come, clear it, by Degrees, of the Whey, and preſs it at Diſcretion. The third Day, let the Cheeſe lie all covered with Nettle-leaves, and turn and ſhift it every Day in more freſh ones, and it will be fit to eat in about three Weeks.

*Cream-cheeſe to make.* Boil five Pints of Cream, and put it to three Pints of Milk, as it comes warm from the Cow; when all is of a Blood-heat, put one Spoonful of Rennet to it, and cover it with a Cloth, 'till it comes; then take a coarſe Straining-cloth, and lay it in a large Cheeſe-vat, and put your Curd tenderly into it. On this put a Cheeſe-board, with a two-pound Weight on it,

to

to drain for three Hours, 'till the Whey is out; then lay it in another Cloth, and put it into a leſſer Cheeſe-vat, with a Board, and a Weight of four Pounds on the ſame. Turn it on Cloths, every two Hours, for one Day, and, after it has lain thus all Night, take it out next Morning, without breaking, and ſalt it on both Sides; keep it in the Vat, under the Weight, one Day more; then put it into a wet Cloth, and ſhift it every Day, 'till it is ripe.

*To make a two-year old Cheeſe.* Mix one Quart of Cream with one Quart of Water, and ſtir it over the Fire, 'till it is ſcalding hot. While this is doing, let five Gallons of Milk be got from the Cows, and immediately coloured with the Juice of Marygold Flowers, which, as ſoon as done, muſt be incorporated with the ſcalding Cream and Water, by ſtirring them in a Tub together with a ſufficient Quantity of Rennet. Cover all with a Cloth, and, when, it is come, ſettle it with two or three Pairs of Hands, and take away the Whey, as faſt as it riſes, 'till no more appears. Put the Curd into the Vat as whole as poſſible, and preſs it an Hour gently; then take it out, cut it into thin Slices, and wipe and dry them ſingly on a Cloth. After this, break the Curd as ſmall as you can with your Hands, and mix, at the ſame Time, a good Handful of Salt, and a Quart of Cream with it; then put it into a Cloth and Vat, and a Pound Weight on it, for twenty-four Hours; afterwards preſs it, as uſual.

*To make a Cheeſe to be eaten at eighteen Months End.* Take the Cream of a Night's Milk, and mix it with the Morning's Milk, make all blood-warm, and ſtir your Rennet well into it. Cover it in a Tub with a Cloth. When it is come, ſeparate the Curd from the Whey, and ſqueeze it in a Cloth on a Cheeſe-rack over the Tub, 'till the Whey

Whey is out, and ſalt it. Then make it in a deep Mould, and ſalt the Outſides, for keeping eighteen Months before it is cut.

*To make a good* Engliſh *Cheeſe.* Take two Gallons of Milk, three Pints of Cream, and three Pints of boiling Water, mix'd well in a Pail together, and, when it is a little hotter than Milk from the Cow, ſtir into it a ſpoonful of Rennet (or leſs, if it be ſtrong) and let it be ſtrained into another Pail together. Cover it with a linnen and woollen Cloth, to keep it warm 'till it comes, then have your Vat and Cloths ready done out of ſcalding Water. The Vat muſt be made like a wooden Mortar, as wide at one End as the other, without a Bottom, and ſet it on a Trencher, and, with a Skimming-diſh, bruiſe the Curd as little as you can, and ſtill, as it ſettles, put in more, and ſo do 'till all is in; and, when it is full, put a Trencher on the Top, turning the Cheeſe-vat every half Hour the firſt Day, and two or three Times the ſecond Day; but be ſure to keep the Trencher faſt when you turn it. You muſt put a Weight on, which muſt be made of Wood, big enough to go within the Cheeſe-vat, and on the Top of that put a Pound Weight, and, as you turn it, change the Weight to the other End of the Cheeſe. At three Days End, take it out, and rub the Top and Bottom with Salt, and let it ſtand to dry, ſometimes rubbing it with a Cloth, to keep it from Moulding. If you put it in ſome Juice of Marygolds, it will make it better to the Eye and Taſte. You may make this Sort at any Time in the Summer, and it will keep all the Year. *N. B.* If you make ſome in *May*, they will be fit to eat at *Michaelmas*. The Marygold Juice is to be got, by bruiſing the Leaves in a Mortar, and ſqueezing them through a Cloth.

## CHAP. XVI.

## *Of* BEES.

THere is nothing in Farming pays better than Bees, where they are diligently and ſkilfully look'd after. For encouraging their Keeping, I ſhall briefly give ſome Account of their Management. The beſt Situation, for their Proſpering, is a full South, open Aſpect, well fenced againſt the Northern Winds, and Poultry, diſtant from ill Smells, expoſed to a free Air, and Sun, and placed near a Houſe, and Orchard. The Hives may be ſet on Stools a Foot high, with an earthen Pan on each of their Tops; theſe Stools ſhould be made three Inches wider than the Bottom of the Hive in the Fore-part, and a little ſloping for the Wets to drain off, and the Bees to light and walk into the Hole or Entrance of their Hive. It's beſt to make one Stool higher than another, and each to ſtand five Feet aſunder. If there are to be two Rows of Stools, let the Rows be eight Feet Diſtance, and the foremoſt ſtand againſt the mid Vacancy of the hindmoſt. But rather better than this, is a ſmall Houſe of two Feet ſquare, to ſtand on four Legs, a Foot high, and covered at Top with a ſhelving Board, or with Tiles, and at each End a Door to ſhut, or open, at Diſcretion; alſo a Board in the Front, made to fall half Way down, more or leſs, at Pleaſure, to keep off extreme Heats from melting the Honey: Or you may have Forms or Benches one over another, to hold many Hives, or a ſingle Bench, with a ſloping Cover of Board, or Tiles, over all, to keep off the Weather. Here you may put the Straw common Hive,

Hive, or the Broad Glaſs-box-Hive; the laſt Sort I ſaw made in great Perfection at *Reading* in *Berkſhire*, and are now much in Uſe, becauſe it's thought to provoke the Bees to Labour, by letting them ſee their own Work, beſides giving their Owner a delightful Proſpect of the unparallelled Ingenuity of theſe ſmall Inſects.

*Thus quick Invention a nice Hive compos'd,*
*And in tranſparent Glaſs the Bee incloſ'd,*
*Which all the Wonders of the State diſplay'd,*
*And open both their Art and Manners laid.*

Dinſdale.

If you would multiply your Stock of Bees, let the Hives be ſmall; if they honey, make them large. If the Spring Seaſon be cold, wet, and windy, it will keep back their Swarming 'till this Month; if calm, warm, and ſmall Showers fall, then it will be in *May*. The Signs of Swarming are, their hovering about the Hole of the Hive in cool Mornings and Evenings, for, if theſe be hot and ſultry, they will hang out in a Cluſter, run haſtily about the Hive, force out their Drones, and cauſe a Moiſtneſs on the Stool. So when the Weather is very hot and gloomy, and the Rain has made them fly Home, and hang together, then it is a Sign they will ſwarm preſently. On the contrary, when it is long, windy, hot, and dry, it impedes or backwards it; therefore, to encourage their Swarming, keep the Hives cool, and water the Ground about them. If you are to make Uſe of a Straw-Hive, dreſs it, by rubbing its Inſide with Baulm, or other ſweet Herbs; but our common Way at *Gaddeſden*, is to uſe Hazel-leaves, or better Fennel, than with ſugar'd Beer, or Ale, to beſmear it. Or, becauſe Bees are believ'd

to be great Lovers of the Smell of Swine, ſome of us give a Hog firſt a Serving of Meat in it, and then rub it with the ſugar'd Liquor. When they ſwarm, throw Duſt among them, or make a Noiſe with a Kettle, Warming-pan, or Piſtol. When the Swarm has ſettled on a Bough of a Tree, keep a Pipe of Tobacco in your Mouth, and it will prevent their Stinging you, for the Smoak of it will prove a Defence; then ſhake the Bough, that the Cluſter of Bees may fall into your Hive, which turn down on a Sheet, ſpread beforehand, on the Ground, where they are to remain, 'till late in the Evening. If the Bough is ſmall, cut it off with the Bees on it, and put it under the Hive. If the Swarm part, and they be in Sight, diſturb the ſmall Parcel, and they will mix with the other; but, if too far off, hive both in two Hives; and ſhake out the Bees off one on the Sheet, and clap the other Hive of Bees directly on them, and they'll incorporate. So, when Swarms are late and ſmall, you may make one of two thus: Put the Hive, that has the Swarm you intend to get out, Top downwards at Night, and immediately place the Bottom of another Hive of Bees on that; then bind a Towel round both their Rims, to ſtand 'till Morning, and the Bees, by that Time, will be all of them in the upper Hive, which you are to ſet on a Stool, or Bench; but this Work muſt be done the ſame Evening, or next at furtheſt, and ſo a third Swarm may be manag'd, by placing a third Hive of Bees over the cut Top of a lower one. If any of the Swarm remain behind, as they commonly do, on the Boughs, to induce them to come down to the reſt in the Hive, we whiſtle, and do it ſometimes half an Hour together; and, when they are got in, if they endeavour to return, and ſettle on the Bough again, about us; it is our Practice to get

up,

up, and rub the Place with wetted Nettles, by which, and by leaving some of the Nettles behind, the Bees will come no more. If they are about to fly away, our Method is, when they are on the Wing, to throw some Hog-dung up in the Air before them, and, if they are in Reach, it may perhaps (as it has done) turn them back again. The next Thing to be done is, late in the Evening, to carry the hived Bees to a Stool or Bench, where they are to remain. But there are other Ways to prevent being stung in hiving Bees, than by smoaking Tobacco; some, therefore, put a fine Net over their Face and Head, and a woollen Pair of Gloves on their Hands: Or, wash their Face with Beer just before, or fan their Face in the Time, with a Bundle of sweet Herbs. Or, if you are stung, pluck out the Sting, if you can, and apply a Copper Half-penny hard on the Place. Or rub the Part with Spittle, or with Rue, or with Salt mix'd with Vinegar; or hold a hot Iron as near as it can be borne.

*How a Woman, who, out of several, had but one Stock of Bees left, out of it raised many.* A Farmer's Wife, a Neighbour of mine, by several Accidents, lost all her Bees to one Hive, and this did not swarm in two Years. Upon which about the Beginning of this Month, she turned her old Hive Bottom upwards, and clapp'd a new one on it, which in a few Hours was furnished with all the Bees, so that she soon took the old one quite away, with all its Honey and Wax. Now by the Bees Working well the same Summer, and a kind Season happening the next, the same Bees swarm'd, and she recovered her old Number of Hives, with great Success; but observe this by the Way, that such Practice is not to be performed, but in Swarming-time.

*When to buy Bees.* There are commonly two Seasons of the Year for this. One is, as soon as a Swarm

Swarm is hived; for, if once the Hive is put on the Stool or Bench, it's improper to diſturb them the ſame Summer. The ſecond Seaſon is, about *Allhallows-tide*, for, by this Time, you have all in the Hive that is to be; and then, by feeling the Weight of it, you may be a better Judge of their Value. But more of this in the proper Month; for here I ſhall only obſerve, that it's commonly regarded for a fortunate Omen to buy a Hive of Bees, by exchanging a Commodity for it of its equal Value. Or to give Gold for it, if Change is to be returned: The Price in our Parts, for a Hive, is about half a Guinea, or eight Shillings.

*Of the Increaſe of Bees in one Summer from one Hive.* There are ſeveral Incidents that ſerve towards the Increaſe and Decreaſe of Bees. If the Spring be mild, calm, and ſhowering, it is good for Swarms, and they will be the earlier, as a certain Author obſerves; but if it be a cold, dry, and windy Spring, there will be few Swarms that Year, becauſe it very much hinders their Feeding and Breeding, for, before their Hives be full, they never ſwarm.

*When now the Hive too populous appears,*
*And the wiſe Regent a Sedition fears,*
*She ſtraight exhorts the Youth their Lot to try,*
*And boldly venture in a Swarm to fly.*

In a right Year for their Increaſe, there are many Hives that have four Swarms; that is, from one Hive a Swarm, a Caſt, a Colt, and a Spew are bred and fly out in one Summer, and all theſe perhaps in Time. The Swarm is the firſt and greateſt Number, the Caſt is the next greateſt, the Colt the next, and the Spew the leaſt of all. The Swarm is that which is let to ſtand for yielding a Stock of Honey, and for Swarming another Year.

Year. The laſt is ſometimes (but rarely) ſaved for the ſame Purpoſe, becauſe the Bees of this are not ſo capable to furniſh a Hive with a ſufficient Quantity of Honey for their Maintenance the following Year, as the firſt Swarm is; therefore it is commonly meer Neceſſity that urges the Owner to keep theſe on for Breeding. The Colt is likewiſe a Swarm, that are fewer and weaker than the firſt two, for which Reaſon, they are all, like the Caſt, killed in *Auguſt*, and the Honey taken out. The Spew, on this Account, are alſo ſerved in the ſame Manner; and ſo are ſometimes the firſt Swarm, either out of Covetouſneſs for their Honey, or becauſe there are Stocks enough beſides. But more of this hereafter.

*How a Farmer increaſed his Honey in a little Time.* At *Chedington*, in *Bucks*, a Farmer carried out his Swarms as ſoon as hived, and ſet them on Stools among the Field Beans that were then in Bloſſom, 1739, though the Crop ſtood not thirty Poles diſtant from the Houſe. Here they got a great deal of Honey in a little Time, becauſe they had not far to go and come, and in due Time he brought them back to their proper Reſidence; and this he does every Year, to his great Advantage: According to the Obſervation of a certain Author, who writes, that, at a Place in *Germany*, he ſaw forty great Hives, which, the People thereabouts ſaid, were all filled with Honey in a Fortnight's Time, by being placed near a Field of Buck, or *French* Wheat, which the Bees dearly love.

CHAP.

## CHAP. XVII.

### *Of Rats and Mice; their Nature, Haunt, and Deſtruction, as practiſed by Farmers and others.*

THeſe are ſome of the Farmers chief Curſes, that are multiplied more in ſome Years, than others; for I have found by woful Experience, that, in mild Winters, and hot, wet Summers, they increaſe their Breed more than ordinary. Accordingly, in the wet, cold Spring and Summer, 1739, there were the feweſt bred, that ever I knew: However, where they are not deſtroyed, in a large Farm, they may, in Time, ruin a Tenant. Therefore I ſhall be more particular in my Writing on theſe Vermin, than any Author has hitherto done.

*An Account of ſeven-hundred Rats, that were bred in and about a Pea-ſtack.* A Farmer, at *Norchurch* in *Hertfordſhire*, made Uſe of an old Rabbit-hutch, that had ſeveral Rooms in it, to ſupport a Pea-ſtack againſt its falling down; but it was not long before the Rats took to it, and bred ſo faſt, that, when the Stack was taken away, the Farmer was forced to raiſe the Poſſe of his Neighbourhood, to help to deſtroy them; and I was told they killed two hundred old Ones, out of (as was gueſſed) ſeven-hundred, ſo that five Hundred were thought to make their Eſcape. My Neighbour's Oats (who lived about half a Mile from me) were by the firſt of *January*, 1741, thought to be eaten a fourth Part up, as they lay in their Straw in a Barn, as I was told by the Oatmeal-maker, that bought Part of his and mine near the ſame Time. Another (who had but little Wheat in his Barn, and which had

had lain in it 'till about *Midſummer*) had it near half eat up, to my certain Knowledge. It is theſe likewiſe, that are the Miller's, Malſter's, Butcher's, Dairy-man's, Fruiterers, and others Peſt; and the more, becauſe they generally feed on the beſt of thoſe Eatables they can come at; therefore, for killing them according to my own, and the Way that many other Farmers take, I ſhall here ſet down as follows, *viz.*

Firſt. *To prevent the Damage of Rats and Mice.* The greateſt common Security that is made uſe of by Farmers is, to lay our Corn abroad in Stacks, and Cocks, and thoſe on brick, or ſtone Pillars, or on wooden Supporters. If on the two firſt, the Props are generally two, or more Feet high, and a Foot, or more broad, with ſtone, or wooden Caps on each Pillar, or Prop, two Feet ſquare. If on the laſt, we nail Pieces of Tin round the wooden Poſts, about the middle Part of the ſame, to hinder the Vermin's Aſcent to the Grain.

*A ſecond Way.* Daub the Purloins of Barns or Granaries with Tar, where the Rats walk, and if they happen to put their Feet in it, it's ſaid they eat them off. Or, if they will not come at it, the Scent will drive them away; but this is an uncertain Method, becauſe the Tar is apt to dry in a little Time, and loſe its Virtue.

*A third Way.* Is to catch a Rat, and daub him all over with Tar, which is ſaid to be ſo diſagreeable to his Fellows that they will not come near him, nor the Places he frequents.

*A fourth Way.* Is to tie a Morrice-Bell about the Neck of a catch'd Rat, and it will anſwer the ſame End.

*A fifth Way.* It is now practiſed by ſome of our Rat-catchers, to make Uſe of trained Ferrets, which they learn to enter among Sheaves of

Wheat, and old Thatch, or over Cielings among Joiſts, to force out Rats from theſe Places of their Harbour, and expoſe them to the Bite of Dogs that ſtand ready for the Purpoſe.

*A ſixth Way; and how to kill the* Norway *Rat without Poiſon.* Theſe Rats are of a very large Size, and ſo ſtrong and furious, that they are hardly to be killed by Cats at a full Age. Nor is it proper to attempt their Deſtruction by Poiſon; becauſe, as theſe are thoſe that, for the moſt Part, lie about Water Corn-mills, it may be of dangerous Conſequence, as I ſhall by and by make appear. And, as this Sort of Rat ſometimes burroughs, and lodges in Holes in the Ground, as well as above it, the tame Ferret has been found very ſerviceable, in entering in, and forcing him out, for killing this grand Enemy of Mankind, by Dogs that are placed accordingly.; for, where theſe are in a conſiderable Number, they eat up Abundance of Corn and Flour.

*A ſeventh Way.* Is to let a Carpenter make Purloin-traps, which with us they do, and find Wood, for 18*d.* a-piece. Fix one, or more of theſe, on Purloins of Barns, Granaries, Stables, Gate-ways, *&c.* and, as they have a heavy Flap, as ſoon as the Trigger is moved by the Rat's paſſing along, it falls on him and beats him flat. When one is catched, another, the ſame, or next Night, generally takes the like Road, and is the more encouraged to venture by the hot Scent of the laſt: Thus (I think it was in the Winter, 1738) I killed twenty Rats by one ſingle Purloin-trap, fixed over my Gate-way.

*An eighth Way.* This Gate-way, joining to my Dwelling-houſe, ſerved as a Sort of Bridge for Rats to paſs over, from a Cieling where they uſed to lie all Day. At laſt, I dipped ſome linnen Rags

in

in Spirits of Turpentine, and forced them through ſome Cracks of the Floor among the Joiſts, and it proved a Cure; for thoſe, that were not killed by the Purloin-trap, forſook the Place after many Years Reſidence. This is that excellent Remedy, by which I preſerve my Collars, and other Harneſs, from being eaten by the Rats, which, before, uſed to do me conſiderable Damage this Way; for, whether theſe miſchievous Creatures are in Want, or not, they will, for Variety's Sake, do ſome Harm or other, to the Farmer eſpecially, becauſe he has the largeſt Harbour for their Breeding, of all others.

*A ninth Way.* Mix Powder of *Nux Vomica* with Lard, and make it into Pills with Sugar.

*A tenth Way.* Take Stibbony, or Glaſs of Antimony Powder, one Ounce; work it up with Butter, and Sugar, and it will vomit and kill Rats, but ſafe from damaging Men.

*Eleventh Way.* Powder one Ounce of Canthariides very fine; the ſame do with one Ounce of Glaſs of Antimony; mix them with half a Pound of Currants, and a Pint of Oatmeal; put it in ſmall Quantities, where the Rats and Mice come, with Water near it,

*Twelfth Way.* Fry Pieces of brown Paper in Hogs-lard, and lay it for the Rats; it is ſaid not to paſs their Bodies.

*Thirteenth Way.* Take wild Cucumber-ſeed, Henbane-ſeed, bitter Almonds, and black Hellebore, beaten together, and make all into a Paſte with Barley-meal and Oil; put this into Rat-holes, either in Houſes, or Fields, for it is ſaid to kill them.

*Fourteenth Way.* Mix powdered Hellebore with Wheat, or Barley-meal, and work it into a Paſte with Honey. The Root muſt be firſt dried,

and then beaten to Powder. Lay it where the Vermin come, and they will eat it, and die quickly.

*Fifteenth Way.* Take the ſoft Pap of coddled Apples, and mix it with white Arſenick and Sugar.

*Sixteenth Way.* Mix Arſenick and the fine Flour of Malt with Hogs-lard; put it in a little Quantity in ſeveral Oyſter-ſhells, and lay them in the Rats Haunts. It is certain Death.

*Seventeenth Way.* Mix powdered white Arſenick with Treacle, and daub round the Hole, through which the Rat paſſes, and ſome of it will ſtick, either to her Feet, or Sides, which ſhe will lick, and die.

*Eighteenth Way.* Or, if you bait a Trap, take a little Oil of Amber, and rub the Bottom of the Trap, and near the Bait; for this will invite them to the Place by the Scent.

*The Danger of uſing Rats-bane, or Arſenick.* This, as it is too cuſtomarily done, was laid as a Bait to kill Rats, and, it being eaten by them, they went into the Chaff-houſe, and died among the Chaff; and though, ſome Time after this the ſame Chaff was given to a Horſe, it made his Hair come off, and near killed him: For, as theſe Creatures are obliged, by the Poiſon, to die a moſt violent, agonizing Death, they endeavour to ſeek Relief, and to die in the ſofteſt Bed. For which Purpoſe, theſe Rats made Choiſe of the Heap of Chaff to alleviate their Torture; but, inſtead thereof, they were forced to make their Exit in a Vomiting, or in a frothy Condition at Mouth, occaſioned by the Vehemency of ſtriving to overcome, by Strength of Nature, the irreſiſtible, corroding Nature of the Mercury; and thus, I ſuppoſe, the Poiſon was communicated to the Horſe,

Horſe, by the Slaver the dying Rats left among the Chaff. I remember, though it is above twenty Years ago, that I laid ſome Rats-bane in Powder, to kill Rats that frequented my Garret joining to a Barn, and it fully anſwered the Intent, as it happened; for, I think, there were about half a Score Rats found dead in one Fleece of Wool, which lay in the ſame Place: It is true, I was not ſenſible in thoſe Days of the great Danger of uſing Mercury for this Purpoſe; if I had, I would not have ventured it; for my Chaff-houſe ſtood but a little Diſtance from this Garret, wherein if ſuch a Number of Rats had died, it might have been the Means, perhaps, of killing all my Horſes, and I not have known the Reaſon of their Deaths. By the ſame Rule, if Poiſon is laid to kill *Norway* Rats in a Corn-mill, or in a Dairy, *&c.* I do not know, but it may be within the Bounds of Poſſibility for Rats, thus poiſoned, to die among Corn, or Meal, or, by lapping in Milk, or Cream (as is natural to them in ſuch a Caſe, for aſſwaging their prodigious Drought) to communicate their Slaver, and damage the human Body; which ſhews the Excellency of thoſe Receipts, that kill Rats without endangering the Health of Man, or Beaſt. But I cannot quit this Subject yet, for, as I write from the Field of Action, I ſhall ſhew,

*How to know if Mice have got into a Cock, or Stack of Corn.* Theſe Vermin ſometimes, get into Sheaves of Wheat, while they ſtand in the Field, and from thence they are conveyed into a Cock, or Stack, or Hovel of Grain: Now, to find whether there be any Mice in theſe, thruſt one or more Sallow, or Aſhen Poles into ſuch a Cock, Stack, or Hovel, and let them lie therein a Day and a Night at leaſt; if there be any Mice, they will gnaw off the Bark, for the Sake of its Moiſture; then it is, that the Corn muſt be taken in with all Speed.

Speed. This is not all I have to write on Rats, and Mice, for I have a further Taſk; to ſhew *how to ſecure Wheat, Oats, and other Grain from theſe Vermin, while they lie in Barns. To deſtroy the Water-rat and Field-mouſe; the Fox, Badger, Hedge-hog, Pole-cat, Kane, Stoat, Field-weaſel, Martern, and many other Sorts of Vermin,* according to a Letter of a Requeſt, for this Purpoſe, ſent me by an unknown Hand. But, before I conclude this Chapter, I think it proper to take Notice of travelling Rat-catchers, who, with the Piece of a broad Sword, fixed in the End of a long Pole, are admitted, by ſome Farmers, to poke it into the Thatch of Barns, to make Rats bolt out, and immediately forſake their Neſt, or Harbour in the ſame, in order for their Dogs to catch and kill them: But, as their Inſtrument is apt to make Holes in the Thatch, to cut the Withs in two, that bind it together, and let the Rain get in, I think it is wrong to ſuffer it, ſince, in this Month, Barns are for the moſt Part empty, and the Farmer has the greateſt Opportunity of laying one, or more, of the aforeſaid Baits for their ſure Deſtruction.

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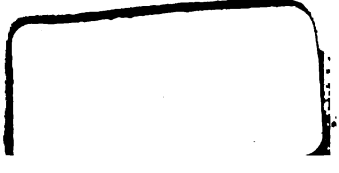
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